SEQUENCE LISTING

<110> diaDexus, Inc.
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<120> Compositions and Methods Relating to Breast Specific Genes and
Proteins

<130> DEX-0432

<150> US 60/389,327
<151> 2002-06-14

<160> 171

<170> PatentIn version 3.1

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gtgctatcca agagatatat aatataatgc cacatgttat atttcctgat agcctcattt     240

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acatagccca gaacttgtag aattctgcat agtgaatgta tattgaatta gtctcctgcc     240

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23

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atgtacattt taatttattt tatttttgta catgggaagc tcctatctta actcattaaa      300

ttcaataaat tttgtatttc tacaacagaa agccaacaaa gggagttgtt agtacatatt      360

tccaggaatg aagttgtctg gatgcagcta atgcctccat agaactgaca gtgctgaatt      420

tacgaaatgg aaagagttct ggaaaagcaa gaaaaaaagt cttgtttgaa· accccacgtc    480

tactgtaggc acagaaggga atggaggcat ctgagcattt tattttccat ctctacagca      540

cctcagaaca cctacatttt attttttttc ttctcagaaa tgtcttaata agaggactgc      600

agtgtactca agtttcccaa tgacagggta gggatgccaa ccttctcttt cattggcagc      660

tcatagtatc caagtttctc aaaaccctaa gccatcttat ttgttctttg gaactttgtg      720

gcctaccaca gtgcaattct cattcggtgt ttaataactc gagccg                     766
```

<210> 21
<211> 647
<212> DNA
<213> Homo sapien

<400> 21
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tgaacatcat catgaataca tgaatcggct gtgatgtgtg aactgctaag ggccaaatga       60

acgtttgcag agcagtgggc acaatgttta caatgtatgt gtatgtcact ttcggtacct      120

gtgaatgcat ggggacgtgc tgaacccgaa aaaaagtgcc tttccataag gactgcaata      180

gagagggcaa tttaccctgg tggtacacgg aacctagatt cactcctgcc atgccttgcc      240

aatagtaagc tgcagggtgg aacaagaaat cacttgctct ggggggaagg gagggggggaa     300

tgggtgtgtc agctgggtag atacaaaccc tgaaaagaga atccatgtgc tgctggcagg      360

caacattttt taaagctctt tcagaaaccc tcatatttgg ggtttctttt caggaaacat      420
```

```
tcctgtggag ggaaaacgaa tatgaagata attttcagct aattatctgg gtgacccaga      480

atcgtgtata tggctatagg atagacttct taataatggc aagtgacgtg gccctgggga      540

aaggtgcttt atgtaccgtg tgtgcgtgta tgtgtgtgta tctatacaag tttgtcagct      600

ttggcatgac tgtttgtttg tctcgaaaac caataaactc aaagttt                    647
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```
<210>   22
<211>   698
<212>   DNA
<213>   Homo sapien

<400>   22
actagcaccg ggcaagcaga caacataatt tatttccaga aaacaacaga atgaacatca       60

tcatgaatac atgaatcggc tgtgatgtgt gaactgctaa gggccaaatg aacgtttgca      120

gagcagtggg cacaatgttt acaatgtatg tgtatgtcac tttcggtacc tgtgaatgca      180

tggggacgtg ctgaacccga aaaaaagtgc ctttccataa ggactgcaat agagagggca      240

atttaccctg gtggtacacg gaacctagat tcactcctgc catgccttgc caatagtaag      300

ctgcagggtg gaacaagaaa tcacttgctc tggggggaag ggaggggga atgggtgtgt       360

cagctgggta gatacaaacc ctgaaaagag aatccatgtg ctgctggcag gcaacatttt      420

ttaaagctct ttcagaaacc ctcatatttg gggtttcttt tcaggaaaca ttcctgtgga      480

gggaaaacga atatgaagat aattttcagc taattatctg ggtgacccag aatcgtgtat      540

atggctatag gatagacttc ttaataatgg caagtgacgt ggccctgggg aaaggtgctt      600

tatgtaccgt gtgtgcgtgt atgtgtgtgt atctatacaa gtttgtcagc tttggcatga      660

ctgtttgttt gtctcgaaaa ccaataaact caaagttt                             698
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```
<210>   23
<211>   739
<212>   DNA
<213>   Homo sapien

<400>   23
taaacttaag gctaatgttt agaagctttt gctaatgaga ggaccatttg ctaaatcggt       60

ataagtgcta cacatttggg tatctccatc ccaacatacc tcttattgcc attccccaaa      120

gcagacaccg tctcctccct ccctcaagga cctctgagct tgcactccaa ttcctctccc      180

acactcacct ttctcctttc tgttcctctt gggatccagg tttatttgag gagataggaa      240

aagctcctga tccagcaggt tttattctta aatttgtaac aaagtaaatc acagaacctc      300

cacccagcat ccaggcctct ggttctctcc ctccttccca ggtataggcc ggctttcaga      360

aaccctgcac cacatagacc ctgggcctga attgctgtga gtaataatga ctctgctcgt      420

aatttgtgtc cttctgcttg gaactgtttc ctttttagtt tggtcaccct cccagagctg      480
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27

gttttcaatgg gggcataccc attatgggat gcagggcatc ctgcatcctg aggaattttt   540

ttttcctccaa aaatgaaacc ttgaaatgag gacattgtcc tgtccacgga ctgcacaaca   600

acactgagcc tcaaggactc atactggcat ttttcttctt ttgcagagtg tgggcaccct   660

ggcttcaagc tcacgagaaa ccaggtcggg atttaaacaa tgttgggtta aagcaaagtt   720

tcataaagac agaatcaag   739

<210> 24
<211> 900
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (75)..(75)
<223> n=a, c, g, or t

<400> 24
agcgacattc ggcacgagta cgtaatatac tccagtttgc aaatgaagga atcttcctgc   60

ggaacgtatg tgaangcata ttggtgctct gggcttttgc ataatttcaa atgtcctttt   120

tttttaaact taaggctaat gtgtagaagc ttttgctaat gagaggacca tttgctaaat   180

cggtataagt gctacacatt tgggtatctc catcccaaca tacctcttat tgccattccc   240

caaagcagac accttctcct ccctccctca aggacctctg agcttgcact ccaattcctc   300

tcccacactc acctttctcc tttctgttcc tcttgggatc caggtttatt tgaggagata   360

ggaaaagctc ctgatccagc aggttttatt cttaaatttg taacaaagta aatcacagaa   420

cctccaccca gcatccaggc ctctggttct ctccctcctt cccaggtata ggccggcttt   480

cagaaaccct gcaccacata gaccctgggc ctgaattgct gtgagtaata atgactctgc   540

tcgtaatttg tgtccttctg cttggaactg tttccttttt agtttggtca ccctcccaga   600

gctggtttca atgggggcat acccattatg ggatgcaggg catcctgcat cctgaggaat   660

ttttttttcct ccaaaaatga aaccttgaaa tgaggacatt gtcctgtcca cggactgcac   720

aacaacactg agcctcaagg actcatactg gcattttttct tcttttgcag agtgtgggca   780

ccctggcttc aagctcacga gaaaccaggt cgggatttaa acaatgttgg gttaaagcaa   840

agtttcataa agacagaatc aagaaaaaaa aaaaaaaaaa atatactggc cgcaaggaat   900

<210> 25
<211> 299
<212> DNA
<213> Homo sapien

<400> 25

28

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ggcagcgcgg aggccgcacg atgcctggag ttactgtaaa agacgtgaac cagcaggagt    60

tcgtcagagc tctggcagcc ttcctcaaaa agtccgggga agctgaaagt ccccgaatgg   120

gtgggatacc gttcaagctg gccaaagcac aaaggagctt gctccctacg atgagaactg   180

gttctacacg cggagctgct ttccaacagc ggcgggccac ctgttacctt ccggggggtgg   240

gcgctggggg ttgggcttcc attgaaccca aggattctat ggggggggaa cgttcagaa    299
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```
<210>  26
<211>  1346
<212>  DNA
<213>  Homo sapien

<400>  26
tttttttttt ttgtgagcca gtgggaaaac caaggaggct aaaccataga gcctggagat    60

gtgaaggaag tacaggtggg taagaaaggg agagccagat cacaagcacc ttgaaaccag   120

acactggttt ggggtcttca gcagtcctct gtcgaaatac atatattcag gggctgggtg   180

tggtggctca cacctgtaat cccagccctt tgggaggcag aggcaggcag attacttgag   240

gtcaagagtt caagacaagc ctggccaaca tggtaaaacc ccgtctctac caaaaatata   300

aaaaactagc cgggcgtggt ggcaggcacc tgattgtaat cccagctact cgggaggctg   360

aggcaggaga atcatttgaa cccagaaggc ggagattgca gtgagctgag atggcgccac   420

tgccactccc agcctgggcg acagagcaag agactcaaaa aagagaccca gaccaggatt   480

acgaatgagg caatttatta acccagcatg gtttgttcta atgcttcttg ttggcagctg   540

ccacctgtcc ggcgattctg tccagatctc tttgtccctg aggtgtcagt ttgcggccgc   600

catcttggtc cttttccacc attttcagcc cctccagggc ttggaggacc cggcgggcca   660

cactcttgga gcctcggctg aagtggctgg gcatgacgcc gtttctctga cgtcccccat   720

agatcttggt catggagcca accccagcgc caccccggag gtacaggtgc cgcgctgtgg   780

aagcagctcg cgtgtagaac cagttctcat cgtagggagc aagctctttg tgcttggcca   840

gcttgacggt atccacccat tcggggactt tcagcttccc ggactttttg aggaaggctg   900

ccagagctct gacgaactcc tgctggttca cgtcttttac agtaactcca ggcatcgtgc   960

ggcctccgcg ctgccagcca ggggaaaggg aacgacgggg tttcccgggc gcacaagtcg  1020

ggcgtagggt ctcgcgagag ttccgaaagc tcgcgagagc gagggtagac gctgaggctc  1080

cgcctctctc agggcgaaag ttcgtccccg cctagagggg aggtgtcta gtgaggggtg   1140

gagaggtaaa ggggagggcc aaggggtcgc gcgtggaggc ctgggtttcc tcccgcgttt  1200

ccttctcccg gagtgtaata gagagaggat agagagctcc tgttcggagc tgggggaact  1260

tggcttcgtt tgcgtcgttc gtggctggaa ggaacagtgg tggagaatac tatgatggcg   1320
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aaagtacggg gcaggatggg tgggcc                                           1346


<210>   27
<211>   136
<212>   DNA
<213>   Homo sapien

<220>
<221>   misc_feature
<222>   (75)..(75)
<223>   n=a, c, g, or t


<400>   27
gtcgccgctg cgaagggagc cgccgccatg tctgcgcatc tgcaatggat ggtcgtgcgg     60

aactgctcca gtttnctgat caagaggaat agccccctgc ccccagagca ataaagtcag    120

ctggctttct cacctg                                                    136


<210>   28
<211>   426
<212>   DNA
<213>   Homo sapien

<400>   28
gctcgaggcc atttcctctc tccagaggac ctttcctgcc taggactcat cattgtcccc     60

tccctggcat tttttacacc tggagcagcc agaggacgca tgcatggctc ttcggaagcc    120

ttctcctgcc acggcatgca cccacacatg cgagcctccc gggtactgtc atcctgaatt    180

ctgagaccat ccagcacttc ctttagtttt gccctggtgc tgttgacttt tgtttactga    240

agagtgtgct ggaggcagga caagggacat ggaaggctgc aatttaagag tctaaaaggt    300

tttagaatcc tgaaggaggt ttaacaagct gaattgaaga ataatacctt tctcaactgg    360

agagaattta catgattgca ttattgttaa aattaacatc tcatctatta aaagcatttg    420

tagatt                                                               426


<210>   29
<211>   264
<212>   DNA
<213>   Homo sapien

<400>   29
cgggaaccct gagacctctc cagcgaagct gaagtgctgt gttacgggag agagtgactg     60

gaaagtaaca aagctgaatc tttctccctg gagtaaggcc gaagactgga ttactacacg    120

cctagacgtg acactacacc catagatctc atgcatcatt aatgccatat gacattgcca    180

ttttctttct cagttcacgg acaaaagtgg tgggttttca ttgcttcact gattgtcaat    240

gcattaataa agaagatgtg tggt                                           264
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```
<210>  30
<211>  265
<212>  DNA
<213>  Homo sapien

<220>
<221>  misc_feature
<222>  (164)..(164)
<223>  n=a, c, g, or t


<220>
<221>  misc_feature
<222>  (168)..(168)
<223>  n=a, c, g, or t


<400>  30
cggccttcct gtaagaaaga tccacggccg ggcccgggcg gccccgcttc ccagagactc      60

atccagccgg aggagatgtg gctctaccgg aacccctacg tggaggcgga gtatttcccc     120

accaagccga tgtttgtgcg tggagaaaga tcgtctttcc tccntccnca tgacccggct     180

tcccgcgggc acctgtgcgt tttccacccc gagacggcct ttgttattgc atttctctct     240

ccactgtctc tgatcttcct ggcca                                          265



<210>  31
<211>  741
<212>  DNA
<213>  Homo sapien

<220>
<221>  misc_feature
<222>  (718)..(718)
<223>  n=a, c, g, or t


<400>  31
ggcaaccaca ggttccaaga tggtttgcgg gggcttcgcg tgttccagtc tccgagtggt      60

cggcgtggtc attgcagtgg gcatcttctt gttcctgatt gctttagtgg gtctgattgg     120

agctgtaaaa catcatcagg tgttgctatt cttttatatg attattctgt tacttgtatt     180

tattgttcag ttttctgtat cttgcgcttg tttagccctg aaccaggagc aacagggtca     240

gcttctggag gttggttgga caatacggc aagtgctcga atgacatcc agagaaatct       300

aaactgctgt gggttccgca gtgttaaccc aaatgacacc tgtctggcta gctgtgttaa     360

aagtgaccac tcgtgctcgc catgtgctcc aatcatagga gaatatgctg gagaggtttt     420

gagatttgtt ggtggcattg gcctgttctt cagttttaca gagatcctgg gtgtttggct     480

gacctacaga tacaggaacc agaaagaccc ccgcgcgaat cctagtgcat tcctttgatg     540

agaaaacaag gaagatttcc tttcgtatta tgatcttgtt cactttctgt aatttttctgt    600
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31

taagctccat ttgccagttt aaggaaggaa acactatctg gaaaagtacc ttattgatag   660

tggaattata tatttaccta gtttctctac agttttcttc cgtgcgaaaa atattganac   720

tgggcctgaa ccggggcacg g   741

<210>   32
<211>   1844
<212>   DNA
<213>   Homo sapien

<400>   32
aaggatcctt aattaaatta atcccccccc cccgctcctt gccagcgtgg atctcctccg   60

agccccgccc tccctcctca cctgctcctg gggaaactac accaaggccg ccgctctggc   120

ctggggctcc ctcccacacg gccttggccc tctcccctc gccccgggac cgctccgccc   180

ctcccggatc ccggtcggcg gagcgcattt atttgcatat ttctacctttt gttccccgcc   240

tgggccaggc cccaaaggca aggacaaagc agctgtcagg gaacctccgc cggagtcgaa   300

tttacgtgca gctgccggca accacaggtt ccaagatggt ttgcgggggc ttcgcgtgtt   360

ccaagaactg cctgtgcgcc ctcaacctgc tttacacctt ggttagtctg ctgctaattg   420

gaattgctgc gtggggcatt ggcttcgggc tgatttccag tctccgagtg gtcggcgtgg   480

tcattgcagt gggcatcttc ttgttcctga ttgctttagt gggtctgatt ggagctgtaa   540

aacatcatca ggtgttgcta ttctttttata tgattattct gttacttgta tttattgttc   600

agttttctgt atcttgcgct tgtttagccc tgaaccagga gcaacagggt cagcttctgg   660

aggttggttg gaacaatacg gcaagtgctc gaaatgacat ccagagaaat ctaaactgct   720

gtgggttccg aagtgttaac ccaaatgaca cctgtctggc tagctgtgtt aaaagtgacc   780

actcgtgctc gccatgtgct ccaatcatag gagaatatgc tggagaggtt ttgagatttg   840

ttggtggcat tggcctgttc ttcagtttta cagagatcct gggtgtttgg ctgacctaca   900

gatacaggaa ccagaaagac ccccgcgcaa atcctagtgc attcctttga tgagaaaaca   960

aggaagattt cctttcgtat tatgatcttg ttcactttct gtaattttct gttaagctcc   1020

atttgccagt ttaaggaagg aaacactatc tggaaaagta ccttattgat agtggaatta   1080

tatattttta ctctatgttt ctctacatgt ttttttcttt ccgttgctga aaaatatttg   1140

aaacttgtgg tctctgaagc tcggtggcac ctggaattta ctgtattcat tgtcgggcac   1200

tgtccactgt ggcctttctt agcattttta cctgcagaaa aactttgtat ggtaccactg   1260

tgttggttat atggtgaatc tgaacgtaca tctcactggt ataattatat gtagcactgt   1320

gctgtgtaga tagttcctac tggaaaaaga gtggaaattt attaaaatca gaaagtatga   1380

gatcctgtta tgttaaggga aatccaaatt cccatttttt tttggtcttt ttaggaaaga   1440

32

```
tgtgttgtgg taaaaagtgt tagtataaaa atgataattt acttgtagtc ttttatgatt     1500

acaccaatgt attctagaaa tagttatgtc ttaggaaatt gtggtttaat ttttgacttt     1560

ttacaggtaa gtgccaagga gaagtggttc ctgaaatgtt ctaatgttta ttaacatttt     1620

aaccttcagc tccatcagaa tggaccgagt tgagtaatca ggaggataac tatatgatct     1680

gaatggtata ctaattggag ctaaagacgc ttttcaccag ttgtttattg gttggccgtg     1740

caaaagattt gttttcaaat gggaaacggg cgaattcgtt ggacgctgtg cagtttgttg     1800

tccctgagaa gatggggggt ttaaaagagg caaaaaaaaa aggg                      1844
```

<210> 33
<211> 242
<212> DNA
<213> Homo sapien

<400> 33
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gctctcactg cctgtgagag ccccatcgtg gtggtgctga gtggcaggag gtctcctctg      60

ttcctcacaa atttccggga agccccaatc agagctggtg aaatagttgt ttttaaagtt     120

gaaggacgag acattccaat agttcacaga gtaatcaaag ttcatgaaaa agataatgga     180

gacatcaaat ttctgactaa aggagataat aatgaagttg atgatagagg cttgtacaaa     240

ga                                                                     242
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<210> 34
<211> 966
<212> DNA
<213> Homo sapien

<400> 34
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aaggatcctt aattaaatta atccccccc ccccggcagc cgtctgtgcc acccagagcc      60

ggcgggccgc taggtccccg gagaccctgc tatggtgcgt gcgggcgccg tgggggctca     120

tctccccgcg tccggcttgg atatcttcgg ggacctgaag aagatgaaca gcgccagct      180

ctattaccag gttttaaact tcgccatgat cgtgtcttct gcactcatga tatggaaagg     240

cttgatcgtg ctcacaggca gtgagagccc catcgtggtg gtgctgagtg gcagtatgga     300

gccggccttt cacagaggag acctcctgtt cctcacaaat ttccgggaag acccaatcag     360

agctggtgaa atagttgttt ttaaagttga aggacgagac attccaatag ttcacagagt     420

aatcaaagtt catgaaaaag ataatggaga catcaaattt ctgactaaag gagataataa     480

tgaagttgat gatagaggct tgtacaaaga aggccagaac tggctggaaa agaaggacgt     540

ggtgggaaga gcaagagggt ttttaccata tgttggtatg gtcaccataa taatgaatga     600

ctatccaaaa ttcaagtatg ctcttttggc tgtaatgggt gcatatgtgt tactaaaacg     660
```

33

```
tgaatcctaa aatgagaagc agttcctggg accagattga aatgaattct gttgaaaaag    720

agaaaaacta atatatttga gatgttccat tttctgtata aaagggaaca gtgtggaaat    780

tgtccgcggt cttgggccaa gtaatagatt tgccgcgggg aaggaaatgg gagtttgtta    840

taaagatggt gcggcagctt ggaggctgtg ctgttccctt cgagttgggg ccgaataatc    900

gaccatgtgt gcccttcctc gcgtccttct agctatgcgg gcgctatgaa ccgggcggtt    960

gggttt                                                              966
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<210>  35
<211>  717
<212>  DNA
<213>  Homo sapien

<220>
<221>  misc_feature
<222>  (685)..(686)
<223>  n=a, c, g, or t


<220>
<221>  misc_feature
<222>  (688)..(688)
<223>  n=a, c, g, or t


<220>
<221>  misc_feature
<222>  (697)..(697)
<223>  n=a, c, g, or t


<400>  35
catgacaccg ggcacccagt ctcctttctt cctgctgctg ctcctcacag tgcttacagt    60

tgttacaggt tctggtcatg caagctctac cccaggtgga gaaaaggaga cttcggctac    120

ccagagaagt tcagtgccca gctctactga gaagaatgct tttaattcct ctctggaaga    180

tcccagcacc gactactacc aagagctgca gagagacatt tctgaaatgg ctgtctgtca    240

gtgccgccga aagaactacg ggcagctgga catctttcca gccccgggat acctaccatc    300

ctatgagcga gtaccccacc taccacaccc atgggcgcta tgtgccccct agcagtaccg    360

atcgtagccc ctatgagaag gtttctgcag gtaatggtgg cagcagcctc tcttacacaa    420

acccagcagt ggcagccact tctgccaact tgtagggca cgtcgccgc tgagctgagt    480

ggccagccag tgccattcca ctccactcag gttcttcagg gccagagccc ctgcacctgt    540

ttgggctggt gagctgggag ttcaggtggg ctgctcacag cctccttcag aggccccacc    600

aatttctcgg acacttctca gtgtgtggaa gctcatgtgg cccctgagg gctcatgcct    660

gggaagtgtt gtggtgggtg ctacnnanga ggactgnccc agagagccct gagatag    717
```

34

```
<210>  36
<211>  774
<212>  DNA
<213>  Homo sapien

<400>  36
catgacaccg ggcacccagt ctcctttctt cctgctgctg ctcctcacag tgcttacagt      60

tgttacaggt tctggtcatg caagctctac cccaggtgga gaaaaggaga cttcggctac     120

ccagagaagt tcagtgccca gctctactga gaagaatgct tttaattcct ctctggaaga     180

tcccagcacc gactactacc aagagctgca gagagacatt tctgaaatgg ctgtctgtca     240

gtgccgccga aagaactacg gcagctgga catctttcca gccccgggat acctaccatc     300

ctatgagcga gtaccccacc taccacaccc atgggcgcta tgtgcccct agcagtaccg      360

atcgtagccc ctatgagaag gtttctgcag gtaatggtgg cagcagcctc tcttacacaa     420

acccagcagt ggcagccact tctgccaact tgtaggggca cgtcgcccgc tgagctgagt     480

ggccagccag tgccattcca ctccactcag gttcttcagg ccagagccc ctgcaccctg      540

tttgggctgg tgagctggga gttcaggtgg ctgctcaca gcctccttca gaggccccac      600

caatttctcg gacacttctc agtgtgtgga agctcatgtg ggccctgag ggctcatgcc      660

tgggaagtgt tgtggtgggt gctcccagga ggactggccc agagagccct gagatagcgg     720

ggatcctgaa ctggactgaa taaaacgtgg tctccccctg cgccaaaaaa aaaa           774


<210>  37
<211>  4144
<212>  DNA
<213>  Homo sapien

<400>  37
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cgcccgctga gctgagtggc cagccagtgc cattccactc cactcaggtt cttcagggcc     1680

agagcccctg caccctgttt gggctggtga gctgggagtt caggtgggct gctcacagcc     1740

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ccctgagggc tcatgcctgg gaagtgttgt ggtgggggct cccaggagga ctggcccaga     1860

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<210>   44
<211>   1755
<212>   DNA
<213>   Homo sapien

<220>
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<222>   (1682)..(1682)
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43

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<220>
<221>   misc_feature
<222>   (1733)..(1733)
<223>   n=a, c, g, or t


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cagcgtgagt gatgtgccat ttcctttctc tgcccagtct ggggctgggg tgccaggctg    1320

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tgccttggct gtctgtcagt gccgccgaaa gaactacggg cagctggaca tctttccagc    1440

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gcccccctagc agtaccgatc gtagcccta tgagaaggtt tctgcaggta atggtggcag    1560
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ancctgacct gttggctgta gctggagtca gtggtgtaag ctcttcaagg ggncagtcat    1740

cgatatgtaa cgttc                                                     1755
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<211>   1530
<212>   DNA
<213>   Homo sapien
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caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac      240

agttgttaca ggttctggtc atgcaagctc taccccaggt ggagaaaagg agacttcggc      300

tacccagaga agttcagtgc ccagctctac tgagaagaat gcttttaatt cctctctgga      360

agatcccagc accgactact accaagagct gcagagagac atttctgaaa tgtttttgca      420

gatttataaa caagggggtt ttctgggcct ctccaatatt aagttcaggc caggatctgt      480

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cagcgtgagt gatgtgccat ttcctttctc tgcccagtct ggggctgggg tgccaggctg      660

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actccaaccc ctacgtcaag atctgtctcc tgccagacca gaagaactca aagcagaccg     1380
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gggtcaaacg caagacccag aagcccgtgt ttgaggagcg ctacaccttc gagatcccct   1440

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gccactgtgt cattgggaaa gtttctgtgg   1530

<210> 46
<211> 563
<212> DNA
<213> Homo sapien

<400> 46
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ccgaggagtc ccaggggtga gcctctgtgc ccctaatcat ctcctaggaa tggagggtag   120

accgagaaag gctggcatag ggggaggttt cccaggtaga agaagaagtg tcagcagacc   180

aggtttctgc aggtaatggt ggcagcagcc tctcttacac aaacccagca gtggcagcca   240

cttctgccaa cttgtagggg cacgtcgccc gctgagctga gtggccagcc agtgccattc   300

cactccactc aggttcttca gggccagagc ccctgcaccc tgtttgggct ggtgagctgg   360

gagttcaggt gggctgctca cagcctcctt cagaggcccc accaatttct cggacacttc   420

tcagtgtgtg gaagctcatg tgggcccctg agggctcatg cctgggaagt gttgtggtgg   480

gggctcccag gaggactggc ccagagagcc ctgagatagc ggggatcctg aactggactg   540

aataaaacgt ggtctcccac tgc   563

<210> 47
<211> 1945
<212> DNA
<213> Homo sapien

<400> 47
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caccaccccg ccagcccacg atgtcacctc agccccggac aacaagccag ccccgggctc   600

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caccgcccct ccagtccaca atgtcacctc ggcctcaggc tctgcatcag gctcagcttc    780

tactctggtg cacaacggca cctctgccag ggctaccaca accccagcca gcaagagcac    840

tccattctca attcccagcc accactctga tactcctacc acccttgcca gccatagcac    900

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cagcacttct ccccagttgt ctactggggt ctctttcttt ttcctgtctt ttcacatttc   1020

aaacctccag tttaattcct ctctggaaga tcccagcacc gactactacc aagagctgca   1080

gagagacatt tctgaaatgt ttttgcagat ttataaacaa gggggttttc tgggcctctc   1140

caatattaag ttcaggccag gatctgtggt ggtacaattg actctggcct ccgagaagg    1200

taccatcaat gtccacgacg tggagacaca gttcaatcag tataaaacgg aagcagcctc   1260

tcgatataac ctgacgatct cagacgtcag cgtgagtgat gtgccatttc ctttctctgc   1320

ccagtctggg gctggggtgc caggctgggg catcgcgctg ctggtgctgg tctgtgttct   1380

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gaaggtttct gcaggtaatg gtggcagcag cctctcttac acaaacccag cagtggcagc   1620

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tgaataaaac gtggtctccc actgc                                        1945
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<210> 48
<211> 1882
<212> DNA
<213> Homo sapien

<400> 48
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gcgggcgggc ggggagtggg gggaccggta taaagcggta ggcgcctgtg cccgctccac    120

ctctcaagca gccagcgcct gcctgaatct gttctgcccc ctccccaccc atttcaccac    180

caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac    240
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47

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aggtggagaa aaggagactt cggctaccca gagaagttca gtgcccagct ctactgagaa   300

gaatgctgtg agtatgacca gcagcgtact ctccagccac agccccggtt caggctcctc   360

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tgccacctgg ggacaggatg tcacctcggt cccagtcacc aggccagccc tgggctccac   480

caccccgcca gcccacgatg tcacctcagc cccggacaac aagccagccc cgggctccac   540

cgccccccca gcccacggtg tcacctcggc cccggacacc aggccggccc cgggctccac   600

cgccccccca gcccatggtg tcacctcggc cccggacaac aggcccgcct tgggctccac   660

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attctcaatt cccagccacc actctgatac tcctaccacc cttgccagcc atagcaccaa   840

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actccactca ggttcttcag ggccagagcc cctgcaccct gtttgggctg gtgagctggg   1680

agttcaggtg ggctgctcac agcctccttc agaggcccca ccaatttctc ggacacttct   1740

cagtgtgtgg aagctcatgt gggcccctga gggctcatgc ctggaagtg ttgtggtggg   1800

ggctcccagg aggactggcc cagagagccc tgagatagcg gggatcctga actggactga   1860

ataaaacgtg gtctcccact gc                                            1882
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<210>   49
<211>   1930
<212>   DNA
<213>   Homo sapien

48

<400> 49

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gctcatgtgg gcccctgagg gctcatgcct gggaagtgtt gtggtggggg ctcccaggag      1860

gactggccca gagagccctg agatagcggg gatcctgaac tggactgaat aaaacgtggt      1920

ctcccactgc                                                            1930
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<211>  1798
<212>  DNA
<213>  Homo sapien
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ggtggtacaa ttgactctgg ccttccgaga aggtaccatc aatgtccacg acgtggagac     1080

acagttcaat cagtataaaa cggaagcagc ctctcgatat aacctgacga tctcagacgt     1140

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gcccccctagc agtaccgatc gtagcccta tgagaaggtt tctgcaggta atggtggcag     1440
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ccctgagggc tcatgcctgg gaagtgttgt ggtgggggct cccaggagga ctggcccaga    1740

gagccctgag atagcgggga tcctgaactg gactgaataa aacgtggtct cccactgc     1798
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<210> 51
<211> 1312
<212> DNA
<213> Homo sapien

<400> 51
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caccatgaca ccggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac    240

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tacccagaga agttcagtgc ccagctctac tgagaagaat gctttgtcta ctggggtctc    360

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cagcaccgac tactaccaag agctgcagag agacatttct gaaatgtttt tgcagattta    480

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59

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60

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61

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<212>  DNA
<213>  Homo sapien

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cctgggaagt gttgtggtgg gggctcccag gaggactggc ccagagagcc ctgagatagc    900

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62

<211> 997
<212> DNA
<213> Homo sapien

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tacccagaga agttcagtgc ccagctctac tgagaagaat gctttgtcta ctggggtctc   360

tttcttttttc ctgtcttttc acatttcaaa cctccagttt aattcctctc tggaagatcc   420

cagcaccgac tactaccaag agctgcagag agacatttct gaaatggctg tctgtcagtg   480

ccgccgaaag aactacgggc agctggacat ctttccagcc cgggtacct accatcctat   540

gagcgagtac cccacctacc acacccatgg gcgctatgtg ccccctagca gtaccgatcg   600

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<211> 548
<212> DNA
<213> Homo sapien

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65

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66

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<210>   69
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gcaccaagac tgatgccagt agcactcacc atagcacggt acctcctctc acctcctcca   960

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<212>   DNA
<213>   Homo sapien

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tgc                                                                  1803
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<211> 1258
<212> DNA
<213> Homo sapien

<400> 71
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agttgttaca ggttctggtc atgcaagctc taccccaggt ggagaaaagg agacttcggc     300

tacccagaga agttcagtgc ccagctctac tgagaagaat gcttttaatt cctctctgga    360
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<212>   DNA
<213>   Homo sapien

<400>   72
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gaagaatgct gtgagtatga ccagcagcgt actctccagc cacagccccg gttcaggctc    420

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caccgcccccc ccagcccacg gtgtcacctc ggccccggac accaggccgg ccccgggctc    660

caccgcccccc ccagcccatg gtgtcacctc ggccccggac aacaggcccg ccttgggctc    720
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tccattctca attcccagcc accactctga tactcctacc acccttgcca gccatagcac       900

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actgc                                                                 2045
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<210> 73
<211> 1266
<212> DNA
<213> Homo sapien

<400> 73
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ctctcaagca gccagcgcct gcctgaatct gttctgcccc ctccccaccc atttcaccac       180

caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac       240
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71

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agctaccaca gcccctaaac ccgcaacagt tgttacaggt tctggtcatg caagctctac     300

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gaagaatgct atcccagcac cgactactac caagagctgc agagagacat ttctgaaatg     420

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<212>   DNA
<213>   Homo sapien

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tcagtataaa acggaagcag cctctcgata taacctgacg atctcagacg tcagcgtgag     540
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<211>    1216
<212>    DNA
<213>    Homo sapien

<400>    75
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73

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<210> 76
<211> 2090
<212> DNA
<213> Homo sapien

<400> 76
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74

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<213>    Homo sapien

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caccgccccc ccagcccacg gtgtcacctc ggccccggac accaggccgg ccccgggctc     660

caccgccccc ccagcccatg gtgtcacctc ggccccggac aacaggcccg ccttgggctc     720

caccgcccct ccagtccaca atgtcacctc ggcctcaggc tctgcatcag gctcagcttc     780

tactctggtg cacaacggca cctctgccag ggctaccaca accccagcca gcaagagcac     840
```

```
tccattctca attcccagcc accactctga tactcctacc acccttgcca gccatagcac    900

caagactgat gccagtagca ctcaccatag cacggtacct cctctcacct cctccaatca    960

cagcacttct ccccagttgt ctactggggt ctctttcttt ttcctgtctt ttcacatttc   1020

aaacctccag tttaattcct ctctggaaga tcccagcacc gactactacc aagagctgca   1080

gagagacatt tctgaaatgt ttttgcagat ttataaacaa ggggtttttc tgggcctctc   1140

caatattaag ttcagtgagt gatgtgccat ttcctttctc tgcccagtct ggggctgggg   1200

tgccaggctg gggcatcgcg ctgctggtgc tggtctgtgt tctggttgcg ctggccattg   1260

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cttcagggcc agagcccctg caccctgttt gggctggtga gctgggagtt caggtgggct   1620

gctcacagcc tccttcagag gccccaccaa tttctcggac acttctcagt gtgtggaagc   1680

tcatgtgggc ccctgagggc tcatgcctgg gaagtgttgt ggtgggggct cccaggagga   1740

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cccactgc                                                            1808
```

<210> 78
<211> 1823
<212> DNA
<213> Homo sapien

<400> 78

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gcgggcgggc ggggagtggg gggaccggta taaagcggta ggcgcctgtg cccgctccac    120

ctctcaagca gccagcgcct gcctgaatct gttctgcccc ctccccaccc atttcaccac    180

caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac    240

agctaccaca gcccctaaac ccgcaacagt tgttacaggt tctggtcatg caagctctac    300

cccaggtgga gaaaaggaga cttcggctac ccagagaagt tcagtgccca gctctactga    360

gaagaatgct gtgagtatga ccagcagcgt actctccagc cacagccccg gttcaggctc    420

ctccaccact cagggacagg atgtcactct ggccccggcc acggaaccag cttcaggttc    480

agctgccacc tggggacagg atgtcacctc ggtcccagtc accaggccag ccctgggctc    540

caccaccccg ccagcccacg atgtcacctc agccccggac aacaagccag ccccgggctc    600
```

76

```
caccgccccc ccagcccacg gtgtcacctc ggccccggac accaggccgg ccccgggctc        660

caccgccccc ccagcccatg gtgtcacctc ggccccggac aacaggcccg ccttgggctc        720

caccgcccct ccagtccaca atgtcacctc ggcctcaggc tctgcatcag gctcagcttc        780

tactctggtg cacaacggca cctctgccag ggctaccaca accccagcca gcaagagcac        840

tccattctca attcccagcc accactctga tactcctacc acccttgcca gccatagcac        900

caagactgat gccagtagca ctcaccatag cacggtacct cctctcacct cctccaatca        960

cagcacttct ccccagttgt ctactggggt ctctttcttt ttcctgtctt ttcacatttc       1020

aaacctccag tttaattcct ctctggaaga tcccagcacc gactactacc aagagctgca       1080

gagagacatt tctgaaatgt ttttgcagat ttataaacaa gggggttttc tgggcctctc       1140

caatattaag ttcaggccag gatctgtggt ggtacaattg actctggcct ccgagaagg        1200

taccatcaat gtccacgacg tggagacaca gttcaatcag tataaaacgg aagcagcctc       1260

tcgatataac ctgacgatct cagacgtcag cggctgtctg tcagtgccgc cgaaagaact       1320

acgggcagct ggacatcttt ccagcccggg atacctacca tcctatgagc gagtacccca       1380

cctaccacac ccatgggcgc tatgtgcccc ctagcagtac cgatcgtagc ccctatgaga       1440

aggtttctgc aggtaatggt ggcagcagcc tctcttacac aaacccagca gtggcagcca       1500

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cactccactc aggttcttca gggccagagc ccctgcaccc tgtttgggct ggtgagctgg       1620

gagttcaggt gggctgctca cagcctcctt cagaggcccc accaatttct cggacacttc       1680

tcagtgtgtg gaagctcatg tgggcccctg agggctcatg cctgggaagt gttgtggtgg       1740

gggctcccag gaggactggc ccagagagcc ctgagatagc ggggatcctg aactggactg       1800

aataaaacgt ggtctcccac tgc                                              1823
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<210>  79
<211>  1630
<212>  DNA
<213>  Homo sapien

<400>  79
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ctctcaagca gccagcgcct gcctgaatct gttctgcccc ctccccaccc atttcaccac        180

caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac        240

agctaccaca gcccctaaac ccgcaacagt tgttacaggt tctggtcatg caagctctac        300

cccaggtgga gaaaaggaga cttcggctac ccagagaagt tcagtgccca gctctactga        360
```

77

```
gaagaatgct gtgagtatga ccagcagcgt actctccagc cacagccccg gttcaggctc      420

ctccaccact cagggacagg atgtcactct ggccccggcc acggaaccag cttcaggttc      480

agctgccacc tggggacagg atgtcacctc ggtcccagtc accaggccag ccctgggctc      540

caccaccccg ccagcccacg atgtcacctc agccccggac aacaagccag ccccgggctc      600

caccgccccc ccagcccacg gtgtcacctc ggccccggac accaggccgg ccccgggctc      660

caccgccccc ccagcccatg gtgtcacctc ggccccggac aacaggcccg ccttgggctc      720

caccgcccct ccagtccaca atgtcacctc ggcctcaggc tctgcatcag gctcagcttc      780

tactctggtg cacaacggca cctctgccag ggctaccaca accccagcca gcaagagcac      840

tccattctca attcccagcc accactctga tactcctacc acccttgcca gccatagcac      900

caagactgat gccagtagca ctcaccatag cacggtacct cctctcacct cctccaatca      960

cagcacttct ccccagttgt ctactggggt ctctttcttt ttcctgtctt ttcacatttc     1020

aaacctccag tttaattcct ctctggaaga tcccagcacc gactactacc aagagctgca     1080

gagagacatt tctgaaatgg ctgtctgtca gtgccgccga aagaactacg ggcagctgga     1140

catctttcca gcccgggata cctaccatcc tatgagcgag taccccacct accacaccca     1200

tgggcgctat gtgcccccta gcagtaccga tcgtagcccc tatgagaagg tttctgcagg     1260

taatggtggc agcagcctct cttacacaaa cccagcagtg gcagccactt ctgccaactt     1320

gtaggggcac gtcgcccgct gagctgagtg gccagccagt gccattccac tccactcagg     1380

ttcttcaggg ccagagcccc tgcaccctgt ttgggctggt gagctgggag ttcaggtggg     1440

ctgctcacag cctccttcag aggccccacc aatttctcgg acacttctca gtgtgtggaa     1500

gctcatgtgg gcccctgagg gctcatgcct gggaagtgtt gtggtggggg ctcccaggag     1560

gactggccca gagagccctg agatagcggg gatcctgaac tggactgaat aaaacgtggt     1620

ctcccactgc                                                          1630
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<210>  80
<211>  640
<212>  DNA
<213>  Homo sapien

<400>  80
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gctggtctgt gttctggttg cgctggccat tgtctatctc attgccttgg ctgtctgtca      120

gtgccgccga aagaactacg ggcagctgga catctttcca gcccgggata cctaccatcc      180

tatgagcgag taccccacct accacaccca tgggcgctat gtgcccccta gcagtaccga      240

tcgtagcccc tatgagaagg tttctgcagg taatggtggc agcagcctct cttacacaaa      300
```

78

```
cccagcagtg gcagccactt ctgccaactt gtaggggcac gtcgcccgct gagctgagtg      360

gccagccagt gccattccac tccactcagg ttcttcaggg ccagagcccc tgcaccctgt      420

ttgggctggt gagctgggag ttcaggtggg ctgctcacag cctccttcag aggccccacc      480

aatttctcgg acacttctca gtgtgtggaa gctcatgtgg gcccctgagg gctcatgcct      540

gggaagtgtt gtggtggggg ctcccaggag gactggccca gagagccctg agatagcggg      600

gatcctgaac tggactgaat aaaacgtggt ctcccactgc                            640
```

```
<210>  81
<211>  874
<212>  DNA
<213>  Homo sapien
```

```
<400>  81
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gcgggcgggc ggggagtggg gggaccggta taaagcggta ggcgcctgtg cccgctccac      120

ctctcaagca gccagcgcct gcctgaatct gttctgcccc ctccccaccc atttcaccac      180

caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac      240

agttgttaca ggttctggtc atgcaagctc taccccaggt ggagaaaagg agacttcggc      300

tacccagaga agttcagtgc ccagctctac tgagaagaat gctgctgtct gtcagtgccg      360

ccgaaagaac tacgggcagc tggacatctt tccagcccgg gatacctacc atcctatgag      420

cgagtacccc acctaccaca cccatgggcg ctatgtgccc cctagcagta ccgatcgtag      480

cccctatgag aaggtttctg caggtaatgg tggcagcagc ctctcttaca caaacccagc      540

agtggcagcc acttctgcca acttgtaggg gcacgtcgcc cgctgagctg agtggccagc      600

cagtgccatt ccactccact caggttcttc agggccagag ccctgcacc ctgtttgggc       660

tggtgagctg ggagttcagg tgggctgctc acagcctcct tcagaggccc caccaatttc      720

tcggacactt ctcagtgtgt ggaagctcat gtgggcccct gagggctcat gcctgggaag      780

tgttgtggtg ggggctccca ggaggactgg cccagagagc cctgagatag cggggatcct      840

gaactggact gaataaaacg tggtctccca ctgc                                  874
```

```
<210>  82
<211>  1084
<212>  DNA
<213>  Homo sapien
```

```
<400>  82
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ccgaggagtc ccaggggtga gcctctgtgc ccctaatcat ctcctaggaa tggagggtag      120
```

79

```
accgagaaag gctggcatag ggggaggttt cccaggtaga agaagaagtg tcagcagacc    180

aggtgagcgt gggtgccagt ggggttcttg ggagcttcaa ggaagcaagg aacgctccct    240

ccttcctctc ctggtctttc tctatgggac ctagtaaata attactgcag ccacctgagg    300

ctggaaaacc actccaggtg ggggaggaga gagtttagtt ttcttgctcc tattttcctc    360

ctcctggaga cctccctctc tcggctttac aaagacacag atacaccccg ccccccaaac    420

acacacacac acacacacac acacctcctt aggctggaac agcagagaat ggagggacaa    480

gggggctgat tagagccaag aagagggagt gaaggagagc agagggagga gggcagccct    540

gtttacagtc acctggctgg tggggtggca ggtgctctct ctgaattaac cctttgagag    600

ctggccagga ctctggactg attaccccag cctggggtgg catccagggg ctctaggagg    660

taccttttgc tcctcaccct ggatctcttt tccttccacc caggtttctg caggtaatgg    720

tggcagcagc ctctcttaca caaacccagc agtggcagcc acttctgcca acttgtaggg    780

gcacgtcgcc cgctgagctg agtggccagc cagtgccatt ccactccact caggttcttc    840

agggccagag cccctgcacc ctgtttgggc tggtgagctg ggagttcagg tgggctgctc    900

acagcctcct tcagaggccc caccaatttc tcggacactt ctcagtgtgt ggaagctcat    960

gtgggcccct gagggctcat gcctgggaag tgttgtggtg ggggctccca ggaggactgg   1020

cccagagagc cctgagatag cggggatcct gaactggact gaataaaacg tggtctccca   1080

ctgc                                                                1084
```

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<210>  83
<211>  1194
<212>  DNA
<213>  Homo sapien

<400>  83
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ctctcaagca gccagcgcct gcctgaatct gttctgcccc ctccccaccc atttcaccac    180

caccatgaca ccgggcaccc agtctccttt cttcctgctg ctgctcctca cagtgcttac    240

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cccaggtgga gaaaaggaga cttcggctac ccagagaagt tcagtgccca gctctactga    360

gaagaatgct gtgagtatga ccagcagcgt actctccagc cacagccccg gttcaggctc    420

ctccaccact cagggacagg atgtcactct ggccccggcc acggaaccag cttcaggttc    480

agctgccacc tggggacagg atgtcacctc ggtcccagtc accaggccag ccctgggctc    540

caccaccccg ccagcccacg atgtcacctc agccccggac aacaagccag ccccgggctc    600
```

```
caccgccccc ccagcccacg gtgtcacctc ggccccggac accaggccgg ccccgggctc    660

caccgccccc ccagcccatg gtgtcacctc ggccccggac aacaggcccg ccttgggctc    720

caccgcccct ccagtccaca atgtcacctc ggcctcaggc tctgcatcag gctcagcttc    780

tactctggtg cacaacggca cctctgccag ggctaccaca accccagcca gcaagagcac    840

tccattctca attcccagcc accactctga tactcctacc acccttgcca gccatagcac    900

caagactgat gccagtagca ctcaccatag cacggtacct cctctcacct cctccaatca    960

cagcacttct ccccagttgt ctactggggt ctctttcttt ttcctgtctt ttcacatttc   1020

aaacctccag tttaattcct ctctggaaga tcccagcacc gactactacc aagagctgca   1080

gagagacatt tctgaaatgt ttttgcagat ttataaacaa gggggttttc tgggcctctc   1140

caatattaag ttcagccagg agctgtggtg gcagaataag cgatcctcta atca         1194
```

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<210>    84
<211>    2623
<212>    DNA
<213>    Homo sapien

<400>    84
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accctcctac cacctgtaga gaagcgggag tggatctgaa ataaaatcca ggaatctggg   120

ggttcctaga cggagccaga cttcggaacg ggtgtcctgc tactcctgct ggggctcctc   180

caggacaagg gcacacaact ggttccgtta agcccctctc tcgctcagac gccatggagc   240

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cccctcctgg gactccccgg cccctgata ccctctgcc tgaggaggta aagaggtccc      360

agcctctcct catcccaacc accggcagga aacttcgaga ggaggagagg cgtgccacct    420

ccctcccctc tatccccaac cccttccctg agctctgcag tcctccctca cagagcccaa    480

ttctcggggg cccctccagt gcaaggggc tgctcccccg cgatgccagc cgcccccatg     540

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cagctcgcca cgtgtgtgaa atgctggtgc agcgagctca cgccttgagc gacgagacct    660

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ggaagctttg gaaacgcttt ttctgcttct tgcgccgatc tggcctctat tactccacca   1020
```

```
agggcacctc taaggatccg aggcacctgc agtacgtggc agatgtgaac gagtccaacg    1080

tgtacgtggt gacgcagggc cgcaagctct acgggatgcc cactgacttc ggtttctgtg    1140

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agcagagccg cacctgctgg ctggctgcct tccgcctctt caagtacggg gtgcagctgt    1260

acaagaatta ccagcaggca cagtctcgcc atctgcatcc atcttgtttg ggctccccac    1320

ccttgagaag tgcctcagat aataccctgg tggccatgga cttctctggc catgctgggc    1380

gtgtcattga gaacccccgg gaggctctga gtgtggccct ggaggaggcc caggcctgga    1440

ggaagaagac aaaccaccgc ctcagcctgc ccatgccagc ctccggcacg agcctcagtg    1500

cagccatcca ccgcacccaa ctctggttcc acgggcgcat ttcccgtgag gagagccagc    1560

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agaggccagt tgatctgctc tgttttatac tagtgacaat aaagattatt ttttgataaa    2220

aaactcagaa ctatctcgtc gcgagtttga taaaaagtgt aaaaaaactg gggggaactt    2280

catagggggt caaacatctc gctgccggcg ataggactt ggctaaactt cttccgagcg    2340

ggccccgtaa gggtggtatg ctgataaaaa tggggggggg cccccctctc aggggccct     2400

ccagaacctt ttggggtgg ggtacccttg ggtggttaac tagtgaactc tttcctcaaa     2460

aggttgccgc cccctgtgta ttgtcgacaa ttttcttggg gggcgggccc gttttctttt    2520

caccacgctt ttgtttttccc gggtggggaa cccaccctg gtgtgtgtgc cccccccgtt    2580

                                                                      2623
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```

<210> 85
<211> 1036
<212> DNA
<213> Homo sapien

<400> 85

82

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ccaattttcg tctccctccc ccagccaagg tctcccaggg gtgcagggag agcggagctg     180

ctcagagctt ggccaggttc taagtgtgct cctgaaagca ggtcacccct gagatcctca     240

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tgccttgtgt gtggtgggcc tggggctggc gccgcagtct ctgaacctgt gtgacgcctg     480

cagggctggg acctgacggt gaagatgctg gcgggcaacg aattccaggt gtccctgagc     540

agctccatgt cggtgtcaga gctgaaggcg cagatcaccc agaagatcgg cgtgcacgcc     600

ttccagcagc gtctggctgt ccacccgagc ggtgtggcgc tgcaggacag ggtccccctt     660

gccagccagg gcctgggccc cggcagcacg gtcctgctgg tggtggacaa atgcgacgaa     720

cctctgagca tcctggtgag gaataacaag ggccgcagca gcacctacga ggtgcggctg     780

acgcagaccg tggcccacct gaagcagcaa gtgagcgggc tggagggtgt gcaggacgac     840

ctgttctggc tgaccttcga ggggaagccc ctggaggacc agctcccgct gggggagtac     900

ggcctcaagc ccctgagcac cgtgttcatg aatctgcgcc tgcggggagg cggcacagag     960

cctggcgggc ggagctaagg gccccaccag catccgagca ggatcaaggg ccggaaataa    1020

aggctgttgt aaagag                                                    1036
```

<210> 86
<211> 753
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (168)..(208)
<223> n=a, c, g, or t

<400> 86
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agttacataa aaaaaaaatt tccccaagtt attttctggc gaagagcttc cctggtatga     120

cctgaaactc aaacttggaa aagagataaa tttaattgga taaaaatnnn nnnnnnnnnn     180

nnnnnnnnnn nnnnnnnnnn nnnnnnnntc tcctgaatct tttatctatg ccttaagcct     240

tttctgttcc cttcaggacc taggcttttg aaacccaaaa gccaggaaaa catgcctttg     300

ttatctgctt tctgcaatca cgtctcttcc atggggcact gagcagagaa tggtgtggcc     360
```

83

aagtgagtag tgagaagcag tgaggaggtg tgagctaggt gtctgttccc attttagaaa   420

atactgttcc tacatcagaa ataccacatt aagacgtata gagccaggtc actgggatgc   480

ttgaacccaa atagctggga ttctggacag agtcagcaga gtacagaagg ctctgaagtg   540

ggagacggag ctggggtgca tccctcccag tgaggagggg tcatgagggg cgtctgggaa   600

gagggacatt tgaactagga ttagctgagt tgccatgatg ctaagataat gggagagtgt   660

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<210>   87
<211>   878
<212>   DNA
<213>   Homo sapien

<220>
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tctataggtg ctggtatata agtattatcg acatcattta agtaatgatt tagaagttac   180

ataaaaaaaa aatttcccca agttattttc tggcgaagag cttccctggt atgacctgaa   240

actcaaactt ggaaaagaga taaatttaat tggataaaaa tnnnnnnnnn nnnnnnnnnn   300

nnnnnnnnnn nnnnnnnnnn nntctcctga atcttttatc tatgccttaa gcctttctg   360

ttcccttcag gacctaggct tttgaaaccc aaaagccagg aaaacatgcc tttgttatct   420

gctttctgca atcacgtctc ttccatgggg cactgagcag agaatggtgt ggccaagtga   480

gtagtgagaa gcagtgagga ggtgtgagct aggtgtctgt tcccatttta gaaaatactg   540

ttcctacatc agaaatacca cattaagacg tatagagcca ggtcactggg atgcttgaac   600

ccaaatagct gggattctgg acagagtcag cagagtacag aaggctctga agtgggagac   660

ggagctgggg tgcatccctc ccagtgagga ggggtcatga ggggcgtctg ggaagaggga   720

catttgaact aggattagct gagttgccat gatgctaaga taatgggaga gtgttctttg   780

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cagtcagtaa agctcttaga acacttaaaa aaaaaaaa   878

<210>   88
<211>   1020
<212>   DNA

<213>   Homo sapien

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aagtgataga atttttgtct agaatcccaa actggcaacg atagtctcca agggacctgg   180

ccttgccaag ggcctggggc aaggtgtcgg cgggacggtg aggaaggggg aggcagcaag   240

agtcactttg ggggaccaat attcttagat atttagagca tcaccttgtt tttatatgca   300

acacaagcct gtctgccacc ctggagcgcc ctgtcacccc tgctgtcgta gctgttggct   360

tcagggtgag aagtgagaag cagcttattg tatatgaggg agccaggccc cgagggtgag   420

cgagatggag aaggggaagg aaggggcttt gggatctgga aaccagcagg ccaggcagca   480

tccacagtgt tagtccaaag ggtcggaccg tgtcgtcagc ctagcgtttg gtcagtgacg   540

gcctggacgg gccaaggaga ctccgggctt gagcccaggc ctcccgcacg gctcagctgc   600

tgaatttttc cttgaggctg tttggtgtgt gacccagcaa gggccctgtg tgggacagca   660

ggagggaggc gtcgcggggc cttagcagaa ggggaacaat gagggcattt catgaaccat   720

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gtgcaggcag aggctcggga ggccggactc aggggtcaga agcagggact ggggcaggcg   840

agcccggaca gggaagaggg gctccgatca aagccggccg tgctgctggc cgggggccca   900

ggtgggtaca agctcctttg tgctttgcac aaacctgaat cccccaccag agaggatgtg   960

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<210>   89
<211>   1854
<212>   DNA
<213>   Homo sapien

<400>   89
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ttcaggaaaa ggctggtaga ggcttcggct gctgtctgga cgtctggacc ctgccatgtg   180

gattataaac ccaaagtgta cagccctagg cgggaggggg tggcgcttct cagccggctg   240

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cactccaagt gcatcctcca ctggcaacag tgggacaatt gcccccgacg gcggcaccgg   360

ggctctgtgg aatcccgatc gttccgagag gtctggaggg ccccgtggtt cctggagaaa   420

gcaggacgca gagaagaaca aatgaggctc acccacgagg ctgggtggcc agcagtctgg   480

gcacacacga gcaggtggca tcttggctct tgcctgaggc cagtcaccct gccctgaatt   540

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ctaccctact ccaccttcag cccctcccgc gggggtagcg cctctcattc ctgatgtctc        600

aggcaaccct ggcagaccca ggtccaactg ctggggtcca agaaccaatt accaaaggaa        660

agatcatcag aggctgaaat ctagaacttc atcccgggca atgaggttct cacagaaggt        720

gcagttttat aactaactac gtccacttat atatattcac actctacata tatatatata        780

tatatatata tatatatata tatatataca cacaaatgca cagtccccct cccactccgt        840

tacctaactg tacgtctttt catgtttata aactatacag aaaactgtat ttgctgaact        900

aaggattgta ttggtgattt ctagcaaaaa caaagtgata gaatttttgt ctagaatccc        960

aaactggcaa cgatagtctc caagggacct ggccttgcca agggcctggg gcaaggtgtc   ·   1020

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aaggggaaca atgagggcat ttcatgaacc atctcaggca cttctgcatc acggaagacc       1560

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tcaggggtca gaagcaggga ctggggcagg cgagcccgga cagggaagag gggctccgat       1680

caaagccggc cgtgctgctg ccggggggcc caggtgggta caagctcctt tgtgctttgc       1740

acaaacctga atcccccacc agagaggatg tgtgtgagga gccagaaacg ctgaatccaa       1800

ttaagagaga aaaataataa taacaataaa tgatcttgga caagaaaaaa aaaa            1854
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<210> 90
<211> 1759
<212> DNA
<213> Homo sapien

<400> 90
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cgtgaagcca aaaacatcaa ctgggactga caacacaaga aagattcttt aactgaggtg        120

gttaaatggc cctgaaaaga gcctttggag acaaagcagc cggcgacccg cggagggagg        180

gagggaggga gcgagcgagc gccaggtccc ggcagggact cacttggagc tggcgtactt        240

ggtgaccgcc ttggtgccct cggacacggc gtgcttggcc agctcgccgg gcagcagcag        300
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86

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gcgcacggcc gtctggatct ccgggacgtg atggtggagc gcttgttgta gtgcgccagg       360

cgggacgcct ctcccgcgat gcgctcgaag atgtcgttga ggaaggagtt catgatgccc       420

atggccttgc accagatgcc ggtgtcgggg tggacccgct tcagcacctt gtacacgtag       480

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gtgacggctt tcttggagcc cttcttggga gccggcgcga actttgcagg ctcaggcatg       600

gccagaccca agaccgacac cgacccccga gaacgcaagc agagcggtag gctcggggtc       660

taccggaaac gactgtgtac ttacagaggc tgtgcgcatg acgctgcgtt atggttcgcg       720

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gagctatcct attggctatc gggacaaaat ttgcttgagc caatcaaagt gctccgtgga       840

caatcgccgt tctgtctata aaaaggtgaa gcagcggcgt tttcggcgac tttcccgatc       900

gccaggcagg agtttctctc ggtgactact atcgctgtca tgtctggtcg tggcaagcaa       960

ggaggcaagg cccgcgccaa ggccaagtcg cgctcgtccc gcgctggcct tcagttcccg      1020

gtagggcgag tgcatcgctt gctgcgcaaa ggcaactacg cggagcgagt gggggccggc      1080

gcgcccgtct acatggctgc ggtcctcgag tatctgaccg ccgagatcct ggagctggcg      1140

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aagggcaagt gaggctgacg tccggcccaa gtgggcccag cccggcccgc gtctcgaagg      1380

ggcacctgtg aactcaaaag gctcttttca gagccaccca cgttttcaaa taaaagagtt      1440

gttaatgctg gccactctca gtccagcgtt cctcagtagt gaatagcgaa cctggagctg      1500

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gtgcgcgccg tcttccatct ggagcacgta actgccttgg ctcttcgatg agtgggtccc      1620

cagtcctagg acttcccagg gcaggtgcag gcaccaaacg tcctgggcgc cgccacggtc      1680

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gcgcggagcg cgcgcttcc                                                   1759
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<210>   91
<211>   1234
<212>   DNA
<213>   Homo sapien

<400>   91
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gctgttgtgt agtttatgtt ggggaatcag ttcatggttt aaaaagttct gtcaatgcag       120
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87

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agaacaagcc ggtgtgtttt atggagaggc tgtttaatct ccactgtgag acagtaaata      180

tttggctgtt gcatcatcgt gaagcttatg atcacagtct ggcgccatct ccctcctcgc      240

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tccccttcct ggtaagccat ccccgacctt ccaggcagaa cctgctggct tctcctcagc      420

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cacactcaga acactttcct ctgcacttac ttcattctgg ttttctttt gggtccttgg       660

tgttttttaaa taaacccttt cctgtagttt gctccccttc catggagggc tgtttcgagc      720

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ccatctggtg tggataacaa gcccacaaat gagcagtcag cttttgtgc cctttagggc      1140

ctgggacaac cacgggatct aaaaggggct ggaactagag gtcttgagct cctgttccta     1200

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<210>  92
<211>  730
<212>  DNA
<213>  Homo sapien

<400>  92
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gataaaattt ccctagaatc tccactatct caaagatgaa gaaagttctc ctcctgatca       120

cagccatctt gggcagtggc tgttggtttc ccagtctctc aagaccagga acgagaaaaa       180

agaagtgtaa gttacctttt ctctttttta catatcagtg acagcgatga attagcttca       240

gggttttttg tgttcccttaa cccatatcca tttcgcccac ttccaccaat tccatttcca      300

agatttccat ggtttagacg taattttcct attccaatac ctgaatctgc ccctacaact       360

ccccttccta gcgaaaagta aacaagaagg aaaagtcacg ataaacctgg tcacctgaaa       420

ttgaaattga gccacttcct tgaagaatca aaattcctgt taataaaaga aaaacaaatg       480
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88

taattgaaat agcacacagc attctctagt caatatcttt agtgatcttc tttaataaac   540

atgaaagcaa atcactaaag atattgacta gagaatgctg tgtgctattt caatatcttt   600

agtgatcttc tttaataaac atgaaagcat aaaaaaaaaa agacgaaaaa aaaaggctgg   660

gggcaccctg ggacaaagcg gtcccggggg ggattggttc ccggccaatt ccacaataag   720

ccgcacaaga   730

<210>   93
<211>   1159
<212>   DNA
<213>   Homo sapien

<400>   93
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tgagatatat aggaaacatc aaaaggtgat aaaatttccc tagaatctcc actatctcaa   180

agatgaagaa agttctcctc ctgatcacag ccatcttggc agtggctgtt ggtttcccag   240

tctctcaaga ccaggaacga gaaaaaagaa gtgtaagtta ccttttctct tttttacata   300

tcagtgacag cgatgaatta gcttcagggt tttttgtgtt cccttaccca tatccatttc   360

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gtcacgataa acctggtcac ctgaaattga aattgagcca cttccttgaa gaatcaaaat   540

tcctgttaat aaaagaaaaa caaatgtaat tgaaatagca cacagcattc tctagtcaat   600

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atgctgtgtg ctatttcaat tacatttgtt tttctttaat aaacatgaat tttgattctt   720

caaggaagtg gctcaatttc aatttcaggt gacctgaaat aaataacaga catatggtta   780

ttaattgcaa tgggtcattt tcttggaaac atatacattt tctgcatttt aatgacaact   840

attggcttaa aaatatatct agttcaagga ctgggaaacc atctgctcaa gatgtagaaa   900

gaaagcaaag gtctttagtg gtaagtagta gctgaaatat ttttttccta gaacagtcct   960

ctgggttcta atttaatctt agataagatt aaattatata tattaaatta taaattatta   1020

tagtagatta gatctatagt ctatagtata gattatattt cctcaattta tctagtaatt   1080

gacacaccat ccactttgtt tttgatgtga tgaaatgaca ggggccactg ttataggtga   1140

agcatgaagc ctttaaaat   1159

<210>   94
<211>   1493

<212> DNA
<213> Homo sapien

<400> 94

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gtgtgaggtg cagctgttgg agtctggggg aggcttggta cagcctgggg ggtccctgag   180

actctcctgt gcagcctctg gattcacctt tagcatctat gccatgagct gggtccgcca   240

ggctccaggg aaggggctgg agtgggtcgc aagtatcagt ttcagtggtg gtagtacata   300

ctacgcagac tccgtgaagg gccgtttcac catctccaga gacaattcca agaccacgat   360

gcatctccac atgaacagcc tgagaaccga cgacacggcc gtctactact gtgcgaaacc   420

gtttccgtat tttgactact ggggccaggg aaccctggtc accgtctcga gtggcgatgg   480

gtccagtggc ggtagcgggg gcgcgtcgac tggcgaagtt gtgttgacgc agtttccagg   540

gcaccctgtc tctgtctcca ggggaaagag ccaccctctc ctgcagggcc agtcagagtg   600

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gaaatctgga actgcctctg ttgtgtgcct gctgaataac ttctatccca gagaggccaa   960

agtacagtgg aaggtggata cgccctacc aatcgggtaa ctcccaggag agtgtcacag  1020

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agactacgag aaacacaaac tctacgcctg cgaagtcacc catcagggcc tgagctcgcc  1140

cgtcacaaag agcttcaaca ggggagagtg ttagagggag aagtgccccc acctgctcct  1200

cagttccagc ctgacccct cccatccttt ggcctctgac ccttttttcca caggggacct  1260

accctattg cggtcctcca gctcatcttt cacctcaccc ccctcctcct ccttggcttt  1320

aattatgcta atgttggagg gagcctgact aaataaagtg aatctttaaa acacaaaaaa  1380

aaggaaaaca aaaaaacaaa aaaaaaaaaa acacgcgggc ggacacccgg ggacaacggg  1440

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<210> 95
<211> 177
<212> PRT
<213> Homo sapien

<400> 95

Met Asn Ser Gly Lys Arg Arg Leu Pro Trp Arg Leu Arg Ser Gly Val
1   5   10   .   15

Pro Ser Pro Pro Gly Leu Leu Ala Pro Ala Pro Ala Pro Cys Ala Pro
            20   25   30

Gly Gly His Arg Arg Ala Pro Gly Pro Arg Arg Val Arg Glu Thr Pro
        35   40   45

Arg Thr Gly Gly Gly Ile Gly Pro Pro Ser Phe Gly Gly Gly Lys Gly
    50   55   60

Gly Trp Lys Glu Glu Gly Ser Gly Val Gly Glu Ser Trp Ser Phe Gly
65   70   75   80

Ile Phe Ser Pro Gly Gln Ala Val Leu Arg Ala Leu Arg Cys Val Ser
            85   90   95

Lys Cys Trp Glu Asp Ser Ala Gly Lys Gly Leu Arg Thr Arg Pro Ala
            100   105   110

Gly Thr Gly Val Ala Ala Ser Glu Gly Arg Gly Glu Pro Met Ala Ser
        115   120   125

Arg Leu Trp Thr Arg Arg Pro Ser Pro Gly Arg Ser Ala Arg Ser Pro
    130   135   140

Pro Pro Ala Ser Cys Ala Gly Pro Cys Pro Ala Ser Pro Ala Met Val
145   150   155   160

Pro His Pro Pro Pro Arg Glu Arg Pro Cys Pro Pro Ile Leu His Phe
            165   170   175

Pro

<210>   96
<211>   55
<212>   PRT
<213>   Homo sapien

<400>   96

Met Gln Asn Ser Thr Ser Ser Gly Leu Cys Val Asn Val Pro Pro Phe
1   5   10   15

Pro Pro Leu Ser Gly Cys Leu Asn Val Phe Pro Phe Phe His Leu Lys

91

```
                 20                    25                        30


Leu Cys Leu Asp Val Leu His Cys His His Leu Phe Leu Arg Lys Arg
        35                    40                    45


Cys Val Pro His Pro Asn Pro
    50                55
```

<210> 97
<211> 24
<212> PRT
<213> Homo sapien

<400> 97

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Met Asp His Phe Tyr Leu Leu Ser Asp Thr Tyr Leu Leu Gly Cys Glu
1               5                   10                  15


Pro Gln Gly Gly Leu Leu Leu Gly
            20
```

<210> 98
<211> 646
<212> PRT
<213> Homo sapien

<400> 98

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Met Glu Pro Ala Ala Gly Phe Leu Ser Pro Arg Pro Phe Gln Arg Ala
1               5                   10                  15


Ala Ala Ala Pro Ala Pro Pro Ala Gly Pro Gly Pro Pro Pro Ser Ala
            20                  25                  30


Leu Arg Gly Pro Glu Leu Glu Met Leu Ala Gly Leu Pro Thr Ser Asp
        35                  40                  45


Pro Gly Arg Leu Ile Thr Asp Pro Arg Ser Gly Arg Thr Tyr Leu Lys
    50                  55                  60


Gly Arg Leu Leu Gly Lys Gly Gly Phe Ala Arg Cys Tyr Glu Ala Thr
65                  70                  75                  80


Asp Thr Glu Thr Gly Ser Ala Tyr Ala Val Lys Val Ile Pro Gln Ser
                85                  90                  95


Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Leu Asn Glu Ile Glu
            100                 105                 110
```

92

Leu His Arg Asp Leu Gln His Arg His Ile Val Arg Phe Ser His His
        115   120   125

Phe Glu Asp Ala Asp Asn Ile Tyr Ile Phe Leu Glu Leu Cys Ser Arg
    130   135   140

Lys Ser Leu Ala His Ile Trp Lys Ala Arg His Thr Leu Leu Glu Pro
145   150   155   160

Glu Val Arg Tyr Tyr Leu Arg Gln Ile Leu Ser Gly Leu Lys Tyr Leu
                165   170   175

His Gln Arg Gly Ile Leu His Arg Asp Leu Lys Leu Gly Asn Phe Phe
            180   185   190

Ile Thr Glu Asn Met Glu Leu Lys Val Gly Asp Phe Gly Leu Ala Ala
        195   200   205

Arg Leu Glu Pro Pro Glu Gln Arg Lys Lys Thr Ile Cys Gly Thr Pro
    210   215   220

Asn Tyr Val Ala Pro Glu Val Leu Leu Arg Gln Gly His Gly Pro Glu
225   230   235   240

Ala Asp Val Trp Ser Leu Gly Cys Val Met Tyr Thr Leu Leu Cys Gly
            245   250   255

Ser Pro Pro Phe Glu Thr Ala Asp Leu Lys Glu Thr Tyr Arg Cys Ile
            260   265   270

Lys Gln Val His Tyr Thr Leu Pro Ala Ser Leu Ser Leu Pro Ala Arg
    275   280   285

Gln Leu Leu Ala Ala Ile Leu Arg Ala Ser Pro Arg Asp Arg Pro Ser
    290   295   300

Ile Asp Gln Ile Leu Arg His Asp Phe Phe Thr Lys Gly Tyr Thr Pro
305   310   315   320

Asp Arg Leu Pro Ile Ser Ser Cys Val Thr Val Pro Asp Leu Thr Pro
            325   330   335

Pro Asn Pro Ala Arg Ser Leu Phe Ala Lys Val Thr Lys Ser Leu Phe
            340   345   350

Gly Arg Lys Lys Lys Ser Lys Asn His Ala Gln Glu Arg Asp Glu Val

                355   360   365

      Ser Gly Leu Val Ser Gly Leu Met Arg Thr Ser Val Gly His Gln Asp
          370   375   380

      Ala Arg Pro Glu Ala Pro Ala Ala Ser Gly Pro Ala Pro Val Ser Leu
      385   390   395   400

      Val Glu Thr Ala Pro Glu Asp Ser Ser Pro Arg Gly Thr Leu Ala Ser
                      405   410   415

      Ser Gly Asp Gly Phe Glu Glu Gly Leu Thr Val Ala Thr Val Val Glu
                  420   425   430

      Ser Ala Leu Cys Ala Leu Arg Asn Cys Ile Ala Phe Met Pro Pro Ala
          435   440   445

      Glu Gln Asn Pro Ala Pro Leu Ala Gln Pro Glu Pro Leu Val Trp Val
          450   455   460

      Ser Lys Trp Val Asp Tyr Ser Asn Lys Phe Gly Phe Gly Tyr Gln Leu
      465   470   475   480

      Ser Ser Arg Arg Val Ala Val Leu Phe Asn Asp Gly Thr His Met Ala
                  485   490   495

      Leu Ser Ala Asn Arg Lys Thr Val His Tyr Asn Pro Thr Ser Thr Lys
                  500   505   510

      His Phe Ser Phe Ser Val Gly Ala Val Pro Arg Ala Leu Gln Pro Gln
          515   520   525

      Leu Gly Ile Leu Arg Tyr Phe Ala Ser Tyr Met Glu Gln His Leu Met
          530   535   540

      Lys Gly Gly Asp Leu Pro Ser Val Glu Glu Val Glu Val Pro Ala Pro
      545   550   555   560

      Pro Leu Leu Leu Gln Trp Val Lys Thr Asp Gln Ala Leu Leu Met Leu
                  565   570   575

      Phe Ser Asp Gly Thr Val Gln Val Asn Phe Tyr Gly Asp His Thr Lys
                  580   585   590

      Leu Ile Leu Ser Gly Trp Glu Pro Leu Leu Val Thr Phe Val Ala Arg
          595   600   605

```
Asn Arg Ser Ala Cys Thr Tyr Leu Ala Ser His Leu Arg Gln Leu Gly
    610             615             620

Cys Ser Pro Asp Leu Arg Gln Arg Leu Arg Tyr Ala Leu Arg Leu Leu
625             630             635             640

Arg Asp Arg Ser Pro Ala
                645
```

```
<210>  99
<211>  99
<212>  PRT
<213>  Homo sapien

<400>  99
```

```
Met Leu Thr Ser Pro Ser Thr Tyr Val Ile Gln Glu Asn Gly Ser Leu
1               5               10              15

Val Glu Ile Arg Asn Ile Leu Gly Glu Lys Tyr Ile Arg Arg Val Arg
            20              25              30

Met Arg Pro Gly Val Ala Cys Ser Val Ser Gln Ala Gln Lys Asp Glu
        35              40              45

Leu Ile Leu Glu Gly Asn Asp Ile Glu Leu Val Ser Asn Ser Ala Cys
    50              55              60

Phe Gly Cys Gln Gln Met Pro Gln Ser Val Lys Asn Lys Asp Ile Arg
65              70              75              80

Lys Phe Leu Asp Gly Ile Tyr Val Ser Glu Lys Gly Thr Val Gln Gln
                85              90              95

Ala Asp Glu
```

```
<210>  100
<211>  220
<212>  PRT
<213>  Homo sapien

<400>  100
```

```
Met Lys Thr Ile Leu Ser Asn Gln Thr Val Asp Ile Pro Glu Asn Gly
1               5               10              15

Met Arg Leu Asp Val Phe Tyr Leu His Leu Tyr Cys Thr Phe Gln Ala
```

95

                    20   25   30

Leu Cys Gly Leu Thr Ser Val Phe Ser Leu Leu Val Asp Ile Thr Leu
        35   40   45

Lys Gly Arg Thr Val Ile Val Lys Gly Pro Arg Gly Thr Leu Arg Arg
    50   55   60

Asp Phe Asn His Ile Asn Val Glu Leu Ser Leu Leu Gly Lys Lys Lys
65   70   75   80

Lys Arg Leu Arg Val Asp Lys Trp Trp Gly Asn Arg Lys Glu Leu Ala
                85   90   95

Thr Val Arg Thr Ile Cys Ser His Val Gln Asn Met Ile Lys Gly Val
            100   105   110

Thr Leu Gly Phe Arg Tyr Lys Met Arg Ser Val Tyr Ala His Phe Pro
        115   120   125

Ile Asn Val Val Ile Gln Glu Asn Gly Ser Leu Val Glu Ile Arg Asn
    130   135   140

Phe Leu Gly Glu Lys Tyr Ile Arg Arg Val Arg Met Arg Pro Gly Val
145   150   155   160

Ala Cys Ser Val Ser Gln Ala Gln Lys Asp Glu Leu Ile Leu Glu Gly
            165   170   175

Asn Asp Ile Glu Leu Val Ser Asn Ser Ala Ala Leu Ile Gln Gln Ala
            180   185   190

Thr Thr Val Lys Asn Lys Asp Ile Arg Lys Phe Leu Asp Gly Ile Tyr
        195   200   205

Val Ser Glu Lys Gly Thr Val Gln Gln Ala Asp Glu
    210   215   220

<210> 101
<211> 47
<212> PRT
<213> Homo sapien

<400> 101

Met Arg Trp His Thr Tyr Leu Cys Cys Leu Lys Val Thr Ile Met Leu
1   5   10   15

96

Pro Tyr Gln Ala Glu Asn Val Thr Thr Ile Trp Arg Phe Arg Arg Val
            20   25   30

Phe Leu Ser Glu Ser Val Met Asn Thr Leu Val Gly Trp Ile Gln
        35   40   45

<210> 102
<211> 51
<212> PRT
<213> Homo sapien

<400> 102

Met Ser Ser His Lys Thr Phe Arg Ile Lys Arg Phe Leu Ala Lys Lys
1   5   10   15

Gln Lys Gln Asn Arg Pro Ile Pro Gln Trp Ile Arg Met Lys Thr Gly
            20   25   30

Asn Lys Ile Arg Tyr Asn Ser Lys Arg Arg His Trp Arg Arg Thr Lys
        35   40   45

Leu Gly Leu
    50

<210> 103
<211> 53
<212> PRT
<213> Homo sapien

<400> 103

Met Glu Arg Val Leu Glu Lys Gln Glu Lys Lys Ser Cys Leu Lys Pro
1   5   10   15

His Val Tyr Cys Arg His Arg Arg Glu Trp Arg His Leu Ser Ile Leu
            20   25   30

Phe Ser Ile Ser Thr Ala Pro Gln Asn Thr Tyr Ile Leu Phe Phe Phe
        35   40   45

Phe Ser Glu Met Ser
    50

<210> 104
<211> 131
<212> PRT
<213> Homo sapien

<400> 104

```
Met Arg Val Ser Glu Arg Ala Leu Lys Asn Val Ala Cys Gln Gln His
1                5                10               15


Met Asp Ser Leu Phe Arg Val Cys Ile Tyr Pro Ala Asp Thr Pro Ile
             20               25               30


Pro Pro Ser Leu Pro Pro Arg Ala Ser Asp Phe Leu Phe His Pro Ala
         35               40               45


Ala Tyr Tyr Trp Gln Gly Met Ala Gly Val Asn Leu Gly Ser Val Tyr
    50               55               60


His Gln Gly Lys Leu Pro Ser Leu Leu Gln Ser Leu Trp Lys Gly Thr
65               70               75               80


Phe Phe Arg Val Gln His Val Pro Met His Ser Gln Val Pro Lys Val
             85               90               95


Thr Tyr Thr Tyr Ile Val Asn Ile Val Pro Thr Ala Leu Gln Thr Phe
             100              105              110


Ile Trp Pro Leu Ala Val His Thr Ser Gln Pro Ile His Val Phe Met
         115              120              125


Met Met Phe
     130


<210> 105
<211> 117
<212> PRT
<213> Homo sapien

<400> 105

Met Ser Ser Phe Gln Gly Phe Ile Phe Gly Gly Lys Lys Ile Pro Gln
1                5                10               15


Asp Ala Gly Cys Pro Ala Ser His Asn Gly Tyr Ala Pro Ile Glu Thr
             20               25               30


Ser Ser Gly Arg Val Thr Lys Leu Lys Arg Lys Gln Phe Gln Ala Glu
         35               40               45


Gly His Lys Leu Arg Ala Glu Ser Leu Leu Leu Thr Ala Ile Gln Ala
    50               55               60


Gln Gly Leu Cys Gly Ala Gly Phe Leu Lys Ala Gly Leu Tyr Leu Gly
```

65   70   75   80

Arg Arg Glu Arg Thr Arg Gly Leu Asp Ala Gly Trp Arg Phe Cys Asp
                85   90   95

Leu Leu Cys Tyr Lys Phe Lys Asn Lys Thr Cys Trp Ile Arg Ser Phe
            100   105   110

Ser Tyr Leu Leu Lys
        115

<210> 106
<211> 93
<212> PRT
<213> Homo sapien

<400> 106

Met Pro Gly Val Thr Val Lys Asp Val Asn Gln Gln Glu Phe Val Arg
1   5   10   15

Ala Leu Ala Ala Phe Leu Lys Lys Ser Gly Glu Ala Glu Ser Pro Arg
            20   25   30

Met Gly Gly Ile Pro Phe Lys Leu Ala Lys Ala Gln Arg Ser Leu Leu
        35   40   45

Pro Thr Met Arg Thr Gly Ser Thr Arg Gly Ala Ala Phe Gln Gln Arg
    50   55   60

Arg Ala Thr Cys Tyr Leu Pro Gly Val Gly Ala Gly Gly Trp Ala Ser
65   70   75   80

Ile Glu Pro Lys Asp Ser Ile Gly Gly Glu Arg Ser Glu
            85   90

<210> 107
<211> 148
<212> PRT
<213> Homo sapien

<400> 107

Met Leu Leu Val Gly Ser Cys His Leu Ser Gly Asp Ser Val Gln Ile
1   5   10   15

Ser Leu Ser Leu Arg Cys Gln Phe Ala Ala Ala Ile Leu Val Leu Phe
            20   25   30

99

His His Phe Gln Pro Leu Gln Gly Leu Glu Asp Pro Ala Gly His Thr
         35   40   45

Leu Gly Ala Ser Ala Glu Val Ala Gly His Asp Ala Val Ser Leu Thr
     50   55   60

Ser Pro Ile Asp Leu Gly His Gly Ala Asn Pro Ser Ala.Thr Pro Glu
65   70   75   80

Val Gln Val Pro Arg Cys Gly Ser Ser Ser Arg Val Glu Pro Val Leu
             85   90   95

Ile Val Gly Ser Lys Leu Phe Val Leu Gly Gln Leu Asp Gly Ile His
             100   105   110

Pro Phe Gly Asp Phe Gln Leu Pro Gly Leu Phe Glu Glu Gly Cys Gln
         115   120   125

Ser Ser Asp Glu Leu Leu Leu Val His Val Phe Tyr Ser Asn Ser Arg
     130   135   140

His Arg Ala Ala
145

<210>   108
<211>   172
<212>   PRT
<213>   Homo sapien

<400>   108

Met Val Cys Gly Gly Phe Ala Cys Ser Ser Leu Arg Val Val Gly Val
1   5   10   15

Val Ile Ala Val Gly Ile Phe Leu Phe Leu Ile Ala Leu Val Gly Leu
         20   25   30

Ile Gly Ala Val Lys His His Gln Val Leu Leu Phe Phe Tyr Met Ile
         35   40   45

Ile Leu Leu Leu Val Phe Ile Val Gln Phe Ser Val Ser Cys Ala Cys
     50   55   60

Leu Ala Leu Asn Gln Glu Gln Gln Gly Gln Leu Leu Glu Val Gly Trp
65   70   75   80

Asn Asn Thr Ala Ser Ala Arg Asn Asp Ile Gln Arg Asn Leu Asn Cys
             85   90   95

```
Cys Gly Phe Arg Ser Val Asn Pro Asn Asp Thr Cys Leu Ala Ser Cys
            100                 105                 110


Val Lys Ser Asp His Ser Cys Ser Pro Cys Ala Pro Ile Ile Gly Glu
            115                 120                 125


Tyr Ala Gly Glu Val Leu Arg Phe Val Gly Gly Ile Gly Leu Phe Phe
    130                 135                 140


Ser Phe Thr Glu Ile Leu Gly Val Trp Leu Thr Tyr Arg Tyr Arg Asn
145                 150                 155                 160


Gln Lys Asp Pro Arg Ala Asn Pro Ser Ala Phe Leu
            165                 170
```

```
<210>    109
<211>    55
<212>    PRT
<213>    Homo sapien

<400>    109

Met Asn Phe Asp Tyr Ser Val Asn Tyr Trp Asn Val Ser Ser Phe Asn
1                5                   10                  15


Phe Lys Asn Asn Tyr Phe Thr Ser Ser Asp Trp Gly Phe Pro Glu Ile
            20                  25                  30


Cys Glu Glu Gln Arg Arg Pro Pro Ala Thr Gln His His His Asp Gly
            35                  40                  45


Ala Leu Thr Gly Ser Glu Ser
    50                  55
```

```
<210>    110
<211>    125
<212>    PRT
<213>    Homo sapien

<400>    110

Met Gln Ala Leu Pro Gln Val Glu Lys Arg Arg Leu Arg Leu Pro Arg
1                5                   10                  15


Glu Val Gln Cys Pro Ala Leu Leu Arg Arg Met Leu Leu Ile Pro Leu
            20                  25                  30


Trp Lys Ile Pro Ala Pro Thr Thr Thr Lys Ser Cys Arg Glu Thr Phe
```

```
            35                    40                        45


Leu Lys Trp Leu Ser Val Ser Ala Ala Glu Arg Thr Thr Gly Ser Trp
    50              55              60


Thr Ser Phe Gln Pro Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro
65              70              75                  80


Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg
            85              90                  95


Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser
            100             105                 110


Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
        115             120                 125


<210>   111
<211>   1256
<212>   PRT
<213>   Homo sapien

<400>   111

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10                  15


Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20              25                  30


Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
            35              40                  45


Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
    50              55              60


Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
65              70              75                  80


Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
            85              90                  95


Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
            100             105                 110


Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro
            115             120                 125
```

102

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    130   135   140

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
145   150   155   160

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
            165   170   175

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Pro Pro Gly Ser Thr Ala
            180   185   190

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        195   200   205

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    210   215   220

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
225   230   235   240

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
            245   250   255

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            260   265   270

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        275   280   285

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    290   295   300

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
305   310   315   320

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
            325   330   335

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            340   345   350

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        355   360   365

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    370   375   380

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
385   390   395   400

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
                405   410   415

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            420   425   430

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        435   440   445

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    450   455   460

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
465   470   475   480

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
                485   490   495

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            500   505   510

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        515   520   525

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    530   535   540

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
545   550   555   560

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
                565   570   575

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            580   585   590

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        595   600   605

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr

```
          610                    615                    620


Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
625                 630                 635                      640


Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
                645             650                 655


Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            660             665                 670


Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        675             680                 685


Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    690             695                 700


Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
705                 710                 715                      720


Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
                725             730                 735


Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            740             745                 750


Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        755             760                 765


Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    770             775                 780


Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
785                 790             795                          800


Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
                805             810                 815


Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
            820             825                 830


Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
        835             840                 845


Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    850             855                 860
```

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
865   870   875   880

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Val His
            885   890   895

Gly Val Thr Ser Ala Pro Asp Ser Arg Ser Gly Ser Gly Phe Leu Pro
            900   905   910

Pro Pro Ala Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala
    915   920   925

Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp
    930   935   940

Asn Arg Pro Ala Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr
945   950   955   960

Ser Ala Ser Gly Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn
            965   970   975

Gly Thr Ser Ala Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro
            980   985   990

Phe Ser Ile Pro Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser
        995   1000   1005

His Ser Thr Lys Thr Asp Ala Ser Ser Thr His His Ser Thr Val
    1010   1015   1020

Pro Pro Leu Thr Ser Ser Asn His Ser Thr Ser Pro Gln Leu Ser
    1025   1030   1035

Thr Gly Val Ser Phe Phe Phe Leu Ser Phe His Ile Ser Asn Leu
    1040   1045   1050

Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln
    1055   1060   1065

Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys
    1070   1075   1080

Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly
    1085   1090   1095

```
Ser Val   Val Val Gln Leu Thr   Leu Ala Phe Arg Glu   Gly Thr Ile
    1100                1105                1110


Asn Val   His Asp Val Glu Thr   Gln Phe Asn Gln Tyr   Lys Thr Glu
    1115                1120                1125


Ala Ala   Ser Arg Tyr Asn Leu   Thr Ile Ser Asp Val   Ser Val Ser
    1130                1135                1140


Asp Val   Pro Phe Pro Phe Ser   Ala Gln Ser Gly Ala   Gly Val Pro
    1145                1150                1155


Gly Trp   Gly Ile Ala Leu Leu   Val Leu Val Cys Val   Leu Val Ala
    1160                1165                1170


Leu Ala   Ile Val Tyr Leu Ile   Ala Leu Ala Val Cys   Gln Cys Arg
    1175                1180                1185


Arg Lys   Asn Tyr Gly Gln Leu   Asp Ile Phe Pro Ala   Arg Asp Thr
    1190                1195                1200


Tyr His   Pro Met Ser Glu Tyr   Pro Thr Tyr His Thr   His Gly Arg
    1205                1210                1215


Tyr Val   Pro Pro Ser Ser Thr   Asp Arg Ser Pro Tyr   Glu Lys Val
    1220                1225                1230


Ser Ala   Gly Asn Gly Gly Ser   Ser Leu Ser Tyr Thr   Asn Pro Ala
    1235                1240                1245


Val Ala   Ala Thr Ser Ala Asn   Leu
    1250                1255


<210> 112
<211> 728
<212> PRT
<213> Homo sapien

<400> 112

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10                  15


Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20                  25                  30


Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
```

```
            35                          40                          45


    Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
        50                          55                          60


    Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
    65                          70                          75                          80


    Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
                        85                          90                          95


    Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
                        100                         105                         110


    Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro
                115                         120                         125


    Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
        130                         135                         140


    Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr
    145                         150                         155                         160


    Ser Ala Pro Asp Thr Arg Pro Pro Gly Ser Thr Ala Pro Pro Ala
                        165                         170                         175


    His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
                        180                         185                         190


    Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
                195                         200                         205


    Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
        210                         215                         220


    Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
    225                         230                         235                         240


    Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
                        245                         250                         255


    Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
                260                         265                         270


    Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
                275                         280                         285
```

```
Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
    290                 295             300


Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
305                  310             315                 320


Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
                325             330                 335


Met Val Ser Ile Gly Leu Ser Phe Pro Ser Ser Pro Glu Ala Ala Ile
                340             345                 350


Arg Thr Val His Thr Leu Cys Ile Lys Pro Glu Ser Phe Pro Ser His
            355             360             365


Pro Ser Phe Cys Arg Phe Ile Asn Lys Gly Val Phe Trp Ala Ser Pro
    370                 375             380


Ile Leu Ser Ser Gly Thr Val Leu Gly Val Asp Pro Val Trp Trp Leu
385                 390             395                 400


Glu Gly Trp Val Val Val Met Thr Val Gly Gly Thr Gly Arg Thr Tyr
                405             410                 415


Gly Trp Gly Lys Ser Arg Glu Pro Glu Leu Gly Pro Val Ala Glu Val
            420             425             430


Pro Ile Phe Pro Val Thr Arg Pro Gly Ser Val Val Val Gln Leu Thr
        435             440             445


Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln
    450             455             460


Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile
465             470             475                 480


Ser Asp Val Ser Gly Glu Ala Thr Ser Leu Ala Ala Ala Gln His His
            485             490                 495


Ala Gly Ala Leu Ser Phe Gln Cys Leu Gly Pro Arg Ser Phe Leu Ser
            500             505         :       510


Ala Gly Ser Gly Arg Gly Ala Ser Ser Gly Arg Leu Pro Cys Pro Leu
            515             520             525
```

```
Leu Phe Leu Leu Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser
    530             535             540

Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys
545             550             555             560

Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Val Ser Ala
            565             570             575

Val Pro Gly Pro Asp Gln Ser Pro Pro Val Glu Gly Ser Ser Met Ala
            580             585             590

Cys His Asn Leu Leu Ser Pro Gln Ala Val Cys Gln Cys Arg Arg Lys
        595             600             605

Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro
    610             615             620

Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro
625             630             635             640

Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Arg Leu Ala Pro Gln
            645             650             655

Ala Arg Gly Ser Arg Gly Phe Gly Trp Ala Arg Ile Leu Lys Gly Val
            660             665             670

Leu Gly Lys Pro Lys Glu Leu Gly Arg Gly Glu Lys Trp Arg Glu Val
        675             680             685

Ser Arg Gly Gly Pro Gly Lys Asp Glu Gly Gln Arg Ser Glu Glu Phe
    690             695             700

Trp Gly Thr Gly Leu Gly Gly Asp Tyr Gly Arg Lys Gly Pro Ser Lys
705             710             715             720

Gly Ser Gly Pro Thr Ala Arg Ile
            725
```

```
<210>  113
<211>  524
<212>  PRT
<213>  Homo sapien

<400>  113

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
```

110

```
1                    5                         10                         15
```

Val Leu Thr Ala Thr Thr Ala Pro Thr Pro Ala Thr Val Val Thr Gly
                 20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
         35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
     50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                 85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
             100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
         115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
     130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala
             165   170   175

Pro Gly Ser Thr Ala Pro Ala Ala His Gly Val Thr Ser Ala Pro Asp
             180   185   190

Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr
         195   200   205

Ser Ala Pro Asp Asn Arg Pro Ala Leu Gly Ser Thr Ala Pro Pro Val
     210   215   220

His Asn Val Thr Ser Ala Ser Gly Ser Ala Ser Gly Ser Ala Ser Thr
225   230   235   240

Leu Val His Asn Gly Thr Ser Ala Arg Ala Thr Thr Thr Pro Ala Ser
             245   250   255

111

Lys Ser Thr Pro Phe Ser Ile Pro Ser His His Ser Asp Thr Pro Thr
                260   265   270

Thr Leu Ala Ser His Ser Thr Lys Thr Asp Ala Ser Ser Thr His His
            275   280   285

Ser Thr Val Pro Pro Leu Thr Ser Ser Asn His Ser Thr Ser Pro Gln
        290   295   300

Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser Phe His Ile Ser Asn
305   310   315   320

Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln
                325   330   335

Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln
            340   345   350

Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val
            355   360   365

Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His
    370   375   380

Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg
385   390   395   400

Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro
                405   410   415

Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu
            420   425   430

Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile
            435   440   445

Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp
        450   455   460

Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr
465   470   475   480

Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser
                485   490   495

112

Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr
            500   505   510

Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
        515   520

<210> 114
<211> 515
<212> PRT
<213> Homo sapien

<400> 114

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20   25   30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
            35   40   45

Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
        50   55   60

Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
65   70   75   80

Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
            85   90   95

Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
            100   105   110

Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro
        115   120   125

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
    130   135   140

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
145   150   155   160

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Ala Ala His
            165   170   175

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala

```
                180                      185                      190


    Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala Leu
            195                      200                      205


    Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly Ser
            210                      215                      220


    Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg
    225                      230                      235                      240


    Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser
                    245                      250                      255


    His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr
                    260                      265                      270


    Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser
                    275                      280                      285


    Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe
            290                      295                      300


    Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp
    305                      310                      315                      320


    Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met
                    325                      330                      335


    Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile
                    340                      345                      350


    Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg
            355                      360                      365


    Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr
    370                      375                      380


    Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser
    385                      390                      395                      400


    Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val
                    405                      410                      415


    Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala
            420                      425                      430
```

114

```
Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg
        435             440             445

Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His
        450             455             460

Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro
465             470             475             480

Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn
                485             490             495

Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser
            500             505             510

Ala Asn Leu
        515


<210> 115
<211> 109
<212> PRT
<213> Homo sapien

<400> 115

Met Leu Glu Arg Arg Pro Pro Ala Val Arg Arg Pro Gly Leu Thr Ala
1               5               10              15

Pro Ala Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
            20              25              30

Gly Ser Thr Ala Pro Ala Ala His Gly Val Thr Ser Ala Pro Asp Thr
        35              40              45

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Phe
    50              55              60

Val Pro Arg Thr Ser Gly Arg Arg Leu Ala Leu Phe Leu Val Tyr Val
65              70              75              80

Phe Arg Val Glu Asp Val Val Gln Thr Arg Leu Asp Thr Leu Arg Ile
                85              90              95

Ala Lys Tyr Ile Asp Gly Ser Tyr Ala Val Ser Val Cys
            100             105
```

```
<210>  116
<211>  174
<212>  PRT
<213>  Homo sapien

<220>
<221>  MISC_FEATURE
<222>  (167)..(167)
<223>  X= any amino acid


<400>  116

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1             5             10             15


Val Leu Thr Ala Thr Thr Ala Pro Thr Pro Ala Thr Val Val Thr Gly
            20             25             30


Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
            35             40             45


Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50             55             60


Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65             70             75             80


Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            85             90             95


Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100            105            110


Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
    115            120            125


Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Arg Pro
    130            135            140


Ser Cys Gly Ser Gly Leu Gly Thr Ala Cys Val Pro Gly Leu Gln Leu
145            150            155            160


Leu Leu Val Gly Ala His Xaa Thr Gln Leu Leu Thr Tyr Asp
            165            170


<210>  117
<211>  475
<212>  PRT
<213>  Homo sapien
```

<400> 117

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
         20   25   30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
         35   40   45

Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
     50   55   60

Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
65   70   75   80

Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
                 85   90   95

Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
             100   105   110

Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro
         115   120   125

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
     130   135   140

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
145   150   155   160

Ala Pro Asp Asn Arg Pro Ala Leu Gly Ser Thr Ala Pro Pro Val His
             165   170   175

Asn Val Thr Ser Ala Ser Gly Ser Ala Ser Gly Ser Ala Ser Thr Leu
             180   185   190

Val His Asn Gly Thr Ser Ala Arg Ala Thr Thr Thr Pro Ala Ser Lys
     195   200   205

Ser Thr Pro Phe Ser Ile Pro Ser His His Ser Asp Thr Pro Thr Thr
     210   215   220

Leu Ala Ser His Ser Thr Lys Thr Asp Ala Ser Ser Thr His His Ser
225   230   235   240

117

Thr Val Pro Pro Leu Thr Ser Ser Asn His Ser Thr Ser Pro Gln Leu
            245   250   255

Ser Thr Gly Val Ser Phe Phe Phe Leu Ser Phe His Ile Ser Asn Leu
            260   265   270

Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu
            275   280   285

Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln Gly
    290   295   300

Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val
305   310   315   320

Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp
            325   330   335

Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr
            340   345   350

Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe
            355   360   365

Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu
    370   375   380

Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala
385   390   395   400

Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile
            405   410   415

Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr
            420   425   430

His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro
            435   440   445

Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr
    450   455   460

Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
465   470   475

```
<210>   118
<211>   231
<212>   PRT
<213>   Homo sapien

<400>   118

Met Cys Pro Leu Ala Val Pro Ile Val Ala Pro Met Arg Arg Phe Leu
1               5                   10                  15


Gln Val Met Val Ala Ala Ala Ser Leu Thr Gln Thr Gln Gln Trp Gln
                20                  25                  30


Pro Leu Leu Pro Thr Cys Arg Gly Thr Ser Pro Ala Glu Leu Ser Gly
            35                  40                  45


Gln Pro Val Pro Phe His Ser Thr Gln Val Leu Gln Gly Gln Ser Pro
        50                  55                  60


Cys Thr Leu Phe Gly Leu Val Ser Trp Glu Phe Arg Trp Ala Ala His
65                  70                  75                  80


Ser Leu Leu Gln Arg Pro His Asp Tyr Phe Arg Lys Phe Glu Pro His
                85                  90                  95


Leu Tyr Ser Leu Asp Ser Asn Ser Asp Asp Val Asp Ser Leu Thr Asp
                100                 105                 110


Glu Glu Ile Leu Ser Lys Tyr Gln Leu Gly Met Leu His Phe Ser Thr
            115                 120                 125


Gln Tyr Asp Leu Leu His Asn His Leu Thr Val Arg Val Ile Glu Ala
    130                 135                 140


Arg Asp Leu Pro Pro Pro Ile Ser His Asp Gly Ser Arg Gln Asp Met
145                 150                 155                 160


Ala His Ser Asn Pro Tyr Val Lys Ile Cys Leu Leu Pro Asp Gln Lys
                165                 170                 175


Asn Ser Lys Gln Thr Gly Val Lys Arg Lys Thr Gln Lys Pro Val Phe
                180                 185                 190


Glu Glu Arg Tyr Thr Phe Glu Ile Pro Phe Leu Glu Ala Gln Arg Arg
            195                 200                 205


Thr Leu Leu Leu Thr Val Val Asp Phe Asp Lys Phe Ser Arg His Cys
```

              210   215   220

Val Ile Gly Lys Val Ser Val
225   230

<210>   119
<211>   107
<212>   PRT
<213>   Homo sapien

<400>   119

Met Val Ala Ala Ala Ser Leu Thr Gln Thr Gln Gln Trp Gln Pro Leu
1   5   10   15

Leu Pro Thr Cys Arg Gly Thr Ser Pro Ala Glu Leu Ser Gly Gln Pro
              20   25   30

Val Pro Phe His Ser Thr Gln Val Leu Gln Gly Gln Ser Pro Cys Thr
          35   40   45

Leu Phe Gly Leu Val Ser Trp Glu Phe Arg Trp Ala Ala His Ser Leu
      50   55   60

Leu Gln Arg Pro His Gln Phe Leu Gly His Phe Ser Val Cys Gly Ser
65   70   75   80

Ser Cys Gly Pro Leu Arg Ala His Ala Trp Glu Val Leu Trp Trp Gly
              85   90   95

Leu Pro Gly Gly Leu Ala Gln Arg Ala Leu Arg
              100   105

<210>   120
<211>   484
<212>   PRT
<213>   Homo sapien

<400>   120

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
              20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
              35   40   45

120

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
        260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
    275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu

```
                290                          295                      300


       Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
       305                 310                 315                 320


       Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
                       325                 330                 335


       Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
                   340                 345                 350


       Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
                   355                 360                 365


       Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly
           370                 375                 380


       Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val
       385                 390                 395                 400


       Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg
                       405                 410                 415


       Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr
                   420                 425                 430


       His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val
                   435                 440                 445


       Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly
           450                 455                 460


       Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr
       465                 470                 475                 480


       Ser Ala Asn Leu



       <210> 121
       <211> 463
       <212> PRT
       <213> Homo sapien

       <400> 121

       Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
       1               5               10                  15
```

122

Val Leu Thr Gly Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser
        20   25   30

Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val
        35   40   45

Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln
    50   55   60

Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala
65   70   75   80

Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu
            85   90   95

Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn
            100   105   110

Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
        115   120   125

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
    130   135   140

Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala Leu Gly Ser Thr Ala
145   150   155   160

Pro Pro Val His Asn Val Thr Ser Ala Ser Gly Ser Ala Ser Gly Ser
            165   170   175

Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg Ala Thr Thr Thr
            180   185   190

Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser His His Ser Asp
        195   200   205

Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr Asp Ala Ser Ser
    210   215   220

Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser Asn His Ser Thr
225   230   235   240

Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser Phe His
            245   250   255

Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp
            260   265   270

Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile
        275   280   285

Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro
    290   295   300

Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile
305   310   315   320

Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala
            325   330   335

Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val
        340   345   350

Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly
        355   360   365

Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val
    370   375   380

Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly
385   390   395   400

Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu
            405   410   415

Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr
            420   425   430

Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser
        435   440   445

Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
    450   455   460

<210> 122
<211> 524
<212> PRT
<213> Homo sapien

<400> 122

Met Gly Arg Glu Lys Glu Ala Ala Ala Gly Lys Glu Ala Ala Asn Pro
1   5   10   15

124

```
Gly Val Thr Glu Ala Ala His Ser Pro Val Leu Leu Val Leu Phe Leu
         20              25                30

Trp Trp Pro Glu Leu Ile Phe Ser Ser Cys Ser Tyr Phe Ser Phe Ile
         35              40                45

Lys Thr Gln Pro Tyr Asp Phe Asn Phe Phe Thr Ala Thr Thr Ala Pro
         50              55                60

Lys Pro Ala Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro
65                70              75                80

Gly Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser
             85              90                95

Ser Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser
             100             105               110

His Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr
         115             120             125

Leu Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly
    130             135             140

Gln Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr
145             150             155               160

Thr Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala
             165             170             175

Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp
             180             185             190

Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr
         195             200             205

Ser Ala Pro Asp Asn Arg Pro Ala Leu Gly Ser Thr Ala Pro Pro Val
210             215             220

His Asn Val Thr Ser Ala Ser Gly Ser Ala Ser Gly Ser Ala Ser Thr
225             230             235               240

Leu Val His Asn Gly Thr Ser Ala Arg Ala Thr Thr Thr Pro Ala Ser
             245             250             255
```

125

Lys Ser Thr Pro Phe Ser Ile Pro Ser His His Ser Asp Thr Pro Thr
            260   265   270

Thr Leu Ala Ser His Ser Thr Lys Thr Asp Ala Ser Ser Thr His His
        275   280   285

Ser Thr Val Pro Pro Leu Thr Ser Ser Asn His Ser Thr Ser Pro Gln
    290   295   300

Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser Phe His Ile Ser Asn
305   310   315   320

Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln
            325   330   335

Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln
            340   345   350

Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val
        355   360   365

Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His
    370   375   380

Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg
385   390   395   400

Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro
            405   410   415

Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu
            420   425   430

Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile
        435   440   445

Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp
    450   455   460

Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr
465   470   475   480

Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser
            485   490   495

126

```
Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr
            500             505             510


Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
        515             520
```

<210> 123
<211> 435
<212> PRT
<213> Homo sapien

<400> 123

```
Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1           5               10              15


Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20              25              30


Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35              40              45


Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
    50              55              60


Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
65              70              75              80


Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
            85              90              95


Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
            100             105             110


Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Arg Pro Ala Leu
        115             120             125


Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly Ser
    130             135             140


Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg
145             150             155             160


Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser
            165             170             175


His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr
            180             185             190
```

127

```
Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser
        195             200             205

Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe
    210             215             220

Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp
225             230             235             240

Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met
            245             250             255

Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile
            260             265             270

Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg
        275             280             285

Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr
    290             295             300

Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser
305             310             315             320

Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val
            325             330             335

Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala
            340             345             350

Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg
        355             360             365

Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His
    370             375             380

Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro
385             390             395             400

Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn
            405             410             415

Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser
            420             425             430
```

```
Ala Asn Leu
        435


<210>   124
<211>   273
<212>   PRT
<213>   Homo sapien

<400>   124

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10                  15


Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20              25                  30


Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35              40                  45


Thr Glu Lys Asn Ala Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser
    50              55                  60


Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser
65              70                  75                  80


Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu
            85                  90                  95


Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe
            100             105                 110


Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly
        115                 120                 125


Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr
    130                 135                 140


Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser
145                 150                 155                 160


Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly
            165                 170                 175


Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala
            180                 185                 190


Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn
```

```
                195                    200                    205


Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met
    210                 215             220


Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser
225                 230             235                 240


Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly
                245             250                 255


Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn
                260             265             270


Leu


.

<210>  125
<211>  350
<212>  PRT
<213>  Homo sapien

<400>  125

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5                   10                  15


Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20              25              30


Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
            35              40              45


Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50              55              60


Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65              70              75                  80


Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85              90              95


Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
                100             105             110


Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
            115             120             125
```

130

```
Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130             135             140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145             150             155             160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            165             170             175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180             185             190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
            195             200             205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210             215             220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225             230             235             240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245             250             255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260             265             270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
            275             280             285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290             295             300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305             310             315             320

Ile Lys Phe Arg Tyr Ser Ser Gly Cys Gly Pro Ser Val Val Val Gly
            325             330             335

Gly Trp Val Val Val Met Thr Val Gly Arg Asp Trp Cys Thr
            340             345             350
```

<210> 126
<211> 316
<212> PRT
<213> Homo sapien

<400> 126

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
        20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
    195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

```
Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245                 250                 255


Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260                 265                 270


Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
            275                 280                 285


Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290                 295                 300


Met Val Ser Ile Gly Leu Ser Phe Pro Met Leu Pro
305                 310                 315


<210>  127
<211>  230
<212>  PRT
<213>  Homo sapien

<400>  127

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5                   10                  15


Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20                  25                  30


Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
            35                  40                  45


Thr Glu Lys Asn Ala Ile Pro Ala Pro Thr Thr Thr Lys Ser Cys Arg
    50                  55                  60


Glu Thr Phe Leu Lys Trp Pro Gly Ser Val Val Val Gln Leu Thr Leu
65                  70                  75                  80


Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe
                85                  90                  95


Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser
            100                 105                 110


Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly
            115                 120                 125
```

```
Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val
    130             135             140
```

```
Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln
145             150             155             160
```

```
Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp
            165             170             175
```

```
Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg
            180             185             190
```

```
Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser
        195             200             205
```

```
Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala
    210             215             220
```

```
Ala Thr Ser Ala Asn Leu
225             230
```

```
<210>  128
<211>  614
<212>  PRT
<213>  Homo sapien

<400>  128
```

```
Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10              15
```

```
Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20              25              30
```

```
Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35              40              45
```

```
Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50              55              60
```

```
Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65              70              75              80
```

```
Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            85              90              95
```

```
Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100             105             110
```

134

```
Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
    115             120             125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130             135             140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145             150             155             160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
              165             170             175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180             185             190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
    195             200             205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210             215             220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225             230             235             240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
              245             250             255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
              260             265             270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
    275             280             285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290             295             300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305             310             315             320

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
              325             330             335

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
            340             345             350
```

135

```
Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
    355             360             365


Ser Val Leu Leu Ile Gly Gly Gly Glu Arg Arg Tyr Arg Ala Met Val
    370             375             380


Ser Ala Thr Gly Ile Ser Leu Gly Ala Met Ala Gly Lys Gly Gly Gly
385             390             395             400


Val Ser Glu Trp Trp Leu Gly Ile Glu Asn Gly Val Leu Leu Leu Ala
                405             410             415


Gly Val Val Val Ala Leu Ala Glu Val Pro Leu Cys Thr Arg Val Glu
            420             425             430


Ala Glu Pro Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu
        435             440             445


Thr Ser Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser
    450             455             460


Phe Phe Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser
465             470             475             480


Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile
        485             490             495


Ser Glu Asp Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly
        500             505             510


Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val
        515             520             525


Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln
    530             535             540


Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp
545             550             555             560


Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg
            565             570             575


Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser
        580             585             590
```

136

Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala
        595   600   605

Ala Thr Ser Ala Asn Leu
     610

<210> 129
<211> 372
<212> PRT
<213> Homo sapien

<400> 129

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
             20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
         35 .   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
     50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                 85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
             100   105   .110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
         115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
         130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
             165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
             180   185   190

```
Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195             200             205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210             215             220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225             230             235             240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245             250             255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
        260             265             270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275             280             285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290             295             300

Met Trp Gly Ala Arg Leu Gly His Arg Ala Ala Gly Ala Gly Leu Cys
305             310             315             320

Ser Gly Cys Ala Gly His Cys Leu Ser His Cys Leu Gly Cys Leu Ser
            325             330             335

Val Pro Pro Lys Glu Leu Arg Ala Ala Gly His Leu Ser Ser Pro Gly
            340             345             350

Tyr Leu Pro Ser Tyr Glu Arg Val Pro His Leu Pro His Pro Trp Ala
        355             360             365

Leu Cys Ala Pro
    370


<210>  130
<211>  256
<212>  PRT
<213>  Homo sapien

<400>  130

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10              15
```

138

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
              20   25   30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
          35   40   45

Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
      50   55   60

Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
65   70   75   80

Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
                  85   90   95

Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
              100   105   110

Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Arg Pro Ala Leu
          115   120   125

Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly Ser
      130   135   140

Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg
145   150   155   160

Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser
              165   170   175

His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr
          180   185   190

Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser
          195   200   205

Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe
      210   215   220

Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp
225   230   235   240

Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met
              245   250   255

<210> 131

<211> 492
<212> PRT
<213> Homo sapien

<400> 131

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
            35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
        50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
        130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
                165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
                245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
                260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
            275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305   310   315   320

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
                325   330   335

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
                340   345   350

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
            355   360   365

Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly
    370   375   380

Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val
385   390   395   400

Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg
                405   410   415

Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr
            420   425   430

His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val
            435   440   445

Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Arg Leu Gly
    450   455   460

141

Pro Thr Gly Gln Gly Lys Gln Arg Val Trp Leu Gly Lys Asp Ser Glu
465   470   475   480

Gly Gly Thr Trp Lys Thr Gln Arg Ala Trp Lys Arg
                485   490

<210> 132
<211> 483
<212> PRT
<213> Homo sapien

<400> 132

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
        100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
    115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
        180   185   190

```
Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195             200                 205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
210             215                 220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225             230                 235                 240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245             250                 255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260             265                 270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275             280                 285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290             295                 300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305             310                 315                 320

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
            325             330                 335

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
            340             345                 350

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
        355             360                 365

Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly
    370             375                 380

Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val
385             390                 395                 400

Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg
            405             410                 415

Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr
    420             425                 430
```

```
His Pro Met Ser Glu Trp Arg Val Tyr Glu Glu Lys Lys Lys Glu Val
        435                 440                 445

Pro Ala Val Pro Glu Thr Leu Lys Lys Lys Arg Arg Asn Phe Ala Glu
    450                 455                 460

Leu Lys Ile Lys Arg Leu Arg Lys Lys Phe Ala Lys Arg Cys Phe Glu
465                 470                 475                 480

Arg Gln Gly
```

<210> 133
<211> 150
<212> PRT
<213> Homo sapien

<400> 133

```
Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1                   5                 10                  15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20                  25                  30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35                  40                  45

Thr Glu Lys Asn Ala Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp
    50                  55                  60

Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Ala Val Cys Gln
65                  70                  75                  80

Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp
                85                  90                  95

Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg
            100                 105                 110

Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser
        115                 120                 125

Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala
    130                 135                 140

Ala Thr Ser Ala Asn Leu
```

145   150

<210> 134
<211> 168
<212> PRT
<213> Homo sapien

<400> 134

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20   25   30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35   40   45

Thr Glu Lys Asn Ala Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser
    50   55   60

Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser
65   70   75   80

Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Ala Val
                85   90   95

Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala
            100   105   110

Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His
        115   120   125

Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys
    130   135   140

Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala
145   150   155   160

Val Ala Ala Thr Ser Ala Asn Leu
                165

<210> 135
<211> 79
<212> PRT
<213> Homo sapien

<400> 135

Ser Pro Glu Trp Leu Thr Leu Ile Ser Ser Pro Gly Lys Asn Tyr Gly
1   5   10   15

Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu
            20   25   30

Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr
        35   40   45

Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser
    50   55   60

Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
65   70   75

<210> 136
<211> 398
<212> PRT
<213> Homo sapien

<400> 136

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
    115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
                165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305   310   315   320

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
            325   330   335

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
            340   345   350

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
        355   360   365

Ser Ala Glu Val Pro Phe His Ile Met Leu Thr Asn Met Gly Thr Met
370   375   380

Glu Tyr His Asn Val Gly Ala Ile Arg Phe Arg His Asn Tyr
385   390   395

<210> 137
<211> 36
<212> PRT
<213> Homo sapien

<400> 137

Gly Arg Leu Leu Leu Leu Leu Leu Glu Phe Lys Leu Leu Thr Met Tyr
1   5   10   15

Gly Leu Met Pro Gly Lys Cys Cys Gly Gly Gly Ser Gln Glu Asp Trp
            20   25   30

Pro Arg Glu Pro
        35

<210> 138
<211> 264
<212> PRT
<213> Homo sapien

<400> 138

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Phe Asn
        50   55   60

Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg
65   70   75   80

Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu
            85   90   95

Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu
            100   105   110

Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr
        115   120   125

```
Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr
    130             135             140

Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln
145             150             155             160

Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val
                165             170             175

Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val
            180             185             190

Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala
        195             200             205

Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His
    210             215             220

Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys
225             230             235             240

Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala
            245             250             255

Val Ala Ala Thr Ser Ala Asn Leu
            260
```

```
<210>  139
<211>  241
<212>  PRT
<213>  Homo sapien

<400>  139
```

```
Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10              15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20              25              30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35              40              45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Phe Leu
    50              55              60
```

149

```
Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe
65              70              75                  80


Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly
            85              90                  95


Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr
            100             105             110


Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser
        115             120             125


Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly
    130             135             140


Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala
145             150             155             160


Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn
            165             170             175


Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met
        180             185             190


Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser
        195             200             205


Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly
    210             215             220


Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn
225             230             235             240


Leu


<210>    140
<211>    92
<212>    PRT
<213>    Homo sapien

<400>    140

Met Ala Cys His Asn Leu Leu Ser Pro Gln Ala Val Cys Gln Cys Arg
1               5               10              15


Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr
            20              25              30
```

```
His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val
        35              40              45
```

```
Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Arg Leu Gly
    50              55              60
```

```
Pro Thr Gly Gln Gly Lys Gln Arg Val Trp Leu Gly Lys Asp Ser Glu
65              70              75              80
```

```
Gly Gly Thr Trp Lys Thr Gln Arg Ala Trp Lys Arg
                85              90
```

```
<210>  141
<211>  420
<212>  PRT
<213>  Homo sapien
```

```
<400>  141
```

```
Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
1           5               10              15
```

```
Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
            20              25              30
```

```
Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
        35              40              45
```

```
Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
    50              55              60
```

```
Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
65              70              75              80
```

```
His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
                85              90              95
```

```
Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            100             105             110
```

```
Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
        115             120             125
```

```
Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
    130             135             140
```

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
145   150   155   160

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
                165   170   175

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            180   185   190

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
        195   200   205

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
    210   215   220

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
225   230   235   240

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
                245   250   255

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
            260   265   270

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
        275   280   285

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
    290   295   300

Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly
305   310   315   320

Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val
            325   330   335

Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg
            340   ·345   350

Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr
        355   360   365

His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val
    370   375   380

Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly

152

385   390   395   400

Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr
                405   410   415

Ser Ala Asn Leu
            420

<210> 142
<211> 485
<212> PRT
<213> Homo sapien

<400> 142

Met Pro Gln Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu
1   5   10   15

Thr Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr
          20   25   30

Gly Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser
          35   40   45

Ala Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val
     50   55   60

Ser Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser
65   70   75   80

Ser Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro
               85   90   95

Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro
          100   105   110

Val Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val
          115   120   125

Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro
     130   135   140

Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser
145   150   155   160

Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro
          165   170   175

153

```
Ala Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser
         180                 185                 190

Gly Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser
         195                 200                 205

Ala Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile
     210                 215                 220

Pro Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr
225                 230                 235                 240

Lys Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr
             245                 250                 255

Ser Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe
             260                 265                 270

Phe Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu
         275                 280                 285

Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser
         290                 295                 300

Glu Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser
305                 310                 315                 320

Asn Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala
             325                 330                 335

Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn
             340                 345                 350

Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp
         355                 360                 365

Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala
     370                 375                 380

Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu
385                 390                 395                 400

Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys
             405                 410                 415
```

Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr
         420   425   430

Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr
      435   440   445

Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala
   450   455   460

Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala
465   470   475   480

Thr Ser Ala Asn Leu
         485

<210> 143
<211> 255
<212> PRT
<213> Homo sapien

<400> 143

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
         20   25   30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
      35   40   45

Thr Glu Lys Asn Ala Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp
   50   55   60

Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile
65   70   75   80

Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro
         85   90   95

Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile
         100   105   110

Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala
      115   120   125

Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val
   130   135   140

Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly
145   150   155   160

Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val
                165   170   175

Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly
            180   185   190

Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu
            195   200   205

Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr
    210   215   220

Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser
225   230   235   240

Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
                245   250   255

<210> 144
<211> 517
<212> PRT
<213> Homo sapien

<400> 144

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85   90   95

156

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
        100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
        180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
    195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Val Ser Ile Gly Leu Ser Phe Pro Ser Ser Pro Glu Ala Ala Ile
305   310   315   320

Arg Thr Val His Thr Leu Cys Ile Lys Pro Glu Ser Phe Pro Ser His
            325   330   335

Pro Ser Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser

                340   345   350

Asn Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala
        355   360   365

Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn
        370   375   380

Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp
385   390   395   400

Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala
                405   410   415

Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu
                420   425   430

Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys
        435   440   445

Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr
        450   455   460

Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr
465   470   475   480

Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala
                485   490   495

Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala
                500   505   510

Thr Ser Ala Asn Leu
        515

<210> 145
<211> 180
<212> PRT
<213> Homo sapien

<400> 145

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
1   5   10   15

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
        20   25   30

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
        35   40   45

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
        50   55   60

Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly
65   70   75   80

Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val
                85   90   95

Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg
            100   105   110

Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr
        115   120   125

His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val
        130   135   140

Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly
145   150   155   160

Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr
                165   170   175

Ser Ala Asn Leu
            180

<210>   146
<211>   232
<212>   PRT
<213>   Homo sapien

<400>   146

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20   25   30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35   40   45

Thr Glu Lys Asn Ala Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu

159

```
          50                      55                      60

Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu
65                  70                  75                      80


Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr
                85                  90                      95


Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr
                100                 105                 110


Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln
            115                 120                 125


Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val
        130                 135                 140


Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val
145                 150                 155                     160


Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala
                165                 170                 175


Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His
                180                 185                 190


Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys
            195                 200                 205


Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala
    210                 215                 220


Val Ala Ala Thr Ser Ala Asn Leu
225                 230


<210>  147
<211>  396
<212>  PRT
<213>  Homo sapien

<400>  147

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5                   10                  15


Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20                  25                  30
```

160

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
        50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
                165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
                245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305   310   315   320

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
                325   330   335

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
            340   345   350

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
        355   360   365

Ser Gly Glu Ala Thr Ser Leu Ala Ala Ala Gln His His Ala Gly Ala
    370   375   380

Pro Leu Leu Pro Val Ser Gly Ser Pro Leu Phe Pro
385   390   395

<210>   148
<211>   325
<212>   PRT
<213>   Homo sapien

<400>   148

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
        35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
        100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
                165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
                245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305   310   315   320

Ile Lys Phe Ser Glu
            325

```
<210>  149
<211>  409
<212>  PRT
<213>  Homo sapien

<400>  149

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5                   10                  15


Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20                  25                  30


Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
            35                  40                  45


Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
        50                  55                  60


Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65                  70                  75                  80


Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85                  90                  95


Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100                 105                 110


Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115                 120                 125


Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
        130                 135                 140


His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145                 150                 155                 160


Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
                165                 170                 175


Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180                 185                 190


Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195                 200                 205


Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
```

164

210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
                245   250   255

Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260   265   270

Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275   280   285

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305   310   315   320

Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe
            325   330   335

Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln
            340   345   350

Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val
        355   360   365

Ser Gly Cys Leu Ser Val Pro Pro Lys Glu Leu Arg Ala Ala Gly His
    370   375   380

Leu Ser Ser Pro Gly Tyr Leu Pro Ser Tyr Glu Arg Val Pro His Leu
385   390   395   400

Pro His Pro Trp Ala Leu Cys Ala Pro
            405

<210> 150
<211> 379
<212> PRT
<213> Homo sapien

<400> 150

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1   5   10   15

Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20   25   30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
            35   40   45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
    50   55   60

Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
65   70   75   80

Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
                85   90   95

Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
            100   105   110

Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
        115   120   125

Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
    130   135   140

His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
145   150   155   160

Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
            165   170   175

Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
            180   185   190

Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
        195   200   205

Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
    210   215   220

Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
225   230   235   240

Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
            245   250   255

```
Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
            260             265             270


Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
        275             280             285


Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
        290             295             300


Met Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile
305             310             315             320


Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr
            325             330             335


His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro
            340             345             350


Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr
        355             360             365


Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
        370             375


<210>   151
<211>   110
<212>   PRT
<213>   Homo sapien

<400>   151

Val Val Thr Trp His Asn Pro Gly Ala Gly Val Pro Gly Trp Gly Ile
1               5               10              15


Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val Tyr
            20              25              30


Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln
        35              40              45


Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu Tyr
        50              55              60


Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp
65              70              75              80


Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser Leu
            85              90              95
```

```
Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
            100             105             110


<210>   152
<211>   127
<212>   PRT
<213>   Homo sapien

<400>   152

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10              15          .


Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20              25              30


Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35              40              45


Thr Glu Lys Asn Ala Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly
    50              55              60


Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu
65              70              75              80


Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr
            85              90              95


Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser
            100             105       .         110


Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
            115             120             125


<210>   153
<211>   336
<212>   PRT
<213>   Homo sapien

<400>   153

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1               5               10              15


Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
            20              25              30


Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala
```

168

```
              35                    40                    45

  Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Val Ser
       50                  55                  60


  Met Thr Ser Ser Val Leu Ser Ser His Ser Pro Gly Ser Gly Ser Ser
  65                  70                  75                  80


  Thr Thr Gln Gly Gln Asp Val Thr Leu Ala Pro Ala Thr Glu Pro Ala
               85                  90                  95


  Ser Gly Ser Ala Ala Thr Trp Gly Gln Asp Val Thr Ser Val Pro Val
              100                 105                 110


  Thr Arg Pro Ala Leu Gly Ser Thr Thr Pro Pro Ala His Asp Val Thr
          115                 120                 125


  Ser Ala Pro Asp Asn Lys Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala
       130                 135                 140


  His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr
  145                 150                 155                 160


  Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala
               165                 170                 175


  Leu Gly Ser Thr Ala Pro Pro Val His Asn Val Thr Ser Ala Ser Gly
              180                 185                 190


  Ser Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala
          195                 200                 205


  Arg Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro
       210                 215                 220


  Ser His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys
  225                 230                 235                 240


  Thr Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser
               245                 250                 255


  Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe
               260                 265                 270


  Phe Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu
       275                 280                 285
```

Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu
    290   295   300

Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn
305   310   315   320

Ile Lys Phe Ser Gln Glu Leu Trp Trp Gln Asn Lys Arg Ser Ser Asn
            325   330   335

<210> 154
<211> 55
<212> PRT
<213> Homo sapien

<400> 154

Met Ala Thr Gln Leu Ile Leu Val Gln Met Ser Leu Phe Pro Asp Ala
1   5   10   15

Pro His Asp Pro Ser Ser Leu Gly Gly Met His Pro Ser Ser Val Ser
            20   25   30

His Phe Arg Ala Phe Cys Thr Leu Leu Thr Leu Ser Arg Ile Pro Ala
        35   40   45

Ile Trp Val Gln Ala Ser Gln
    50   55

<210> 155
<211> 97
<212> PRT
<213> Homo sapien

<400> 155

Met Asn His Leu Arg His Phe Cys Ile Thr Glu Asp Leu Ala Leu Pro
1   5   10   15

Ala Val Leu Gly Met Leu Arg Val Gln Ala Glu Ala Arg Glu Ala Gly
            20   25   30

Leu Arg Gly Gln Lys Gln Gly Leu Gly Gln Ala Ser Pro Asp Arg Glu
        35   40   45

Glu Gly Leu Arg Ser Lys Pro Ala Val Leu Leu Ala Gly Gly Pro Gly
    50   55   60

Gly Tyr Lys Leu Leu Cys Ala Leu His Lys Pro Glu Ser Pro Thr Arg

```
        65                    70                   75                   80
```

```
Glu Asp Val Cys Glu Glu Pro Glu Thr Leu Asn Pro Ile Lys Arg Glu
                85                   90                   95
```

```
Lys
```

```
<210>   156
<211>   52
<212>   PRT
<213>   Homo sapien
```

```
<400>   156
```

```
Met Leu Cys Ala Ile Ser Ile Ser Leu Val Ile Phe Phe Asn Lys His
1               5                   10                  15
```

```
Glu Ser Ile Lys Lys Lys Arg Arg Lys Lys Lys Ala Gly Gly Thr Leu
                20                  25                  30
```

```
Gly Gln Ser Gly Pro Gly Gly Asp Trp Phe Pro Ala Asn Ser Thr Ile
            35                  40                  45
```

```
Ser Arg Thr Arg
        50
```

```
<210>   157
<211>   23
<212>   DNA
<213>   Artificial sequence
```

```
<220>
<223>   Synthetic
```

```
<400>   157
cacttccttt agttttgccc tgg                                           23
```

```
<210>   158
<211>   23
<212>   DNA
<213>   Artificial sequence
```

```
<220>
<223>   Synthetic
```

```
<400>   158
atcctgaatt ctgagaccat cca                                           23
```

```
<210>   159
<211>   21
<212>   DNA
```

```
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  159
gcctccagca cactcttcag t                                            21


<210>  160
<211>  25
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  160
agccggagga gatgtggctc taccg                                        25


<210>  161
<211>  20
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  161
ccgcttccca gagactcatc                                              20


<210>  162
<211>  19
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  162
gcacaaacat cggcttggt                                               19


<210>  163
<211>  27
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  163
agagagacat ttctgaaatg gctgtct                                      27


<210>  164
<211>  21
<212>  DNA
<213>  Artificial sequence
```

```
<220>
<223>  Synthetic

<400>  164
cccagcaccg actactacca a                                              21


<210>  165
<211>  20
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  165
agctgcccgt agttctttcg                                                20


<210>  166
<211>  27
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  166
ctgaaagcag gtcacccctg agatcct                                        27


<210>  167
<211>  21
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  167
cagagcttgg ccaggttcta a                                              21


<210>  168
<211>  19
<212>  DNA
<213>  Artificial sequence

<220>
<223>  Synthetic

<400>  168
tgctagggtg cccctctgt                                                 19


<210>  169
<211>  24
<212>  DNA
<213>  Artificial sequence
```

```
<220>
<223>   Synthetic

<400>   169
cctttagggc ctgggacaac cacg                                      24


<210>   170
<211>   22
<212>   DNA
<213>   Artificial sequence

<220>
<223>   Synthetic

<400>   170
tggataacaa gcccacaaat ga                                        22


<210>   171
<211>   23
<212>   DNA
<213>   Artificial sequence

<220>
<223>   Synthetic

<400>   171
cctctagttc cagccccttt tag                                       23
```